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No. 8

IN THE

Supreme Court of the United States

OCTOBER TERM, A. D. 1914.

THE EAST STEEL COMPANY and GUILFORD S. WOOD, *Petitioners*,
vs.
THE RAILROAD SUPPLY COMPANY, *Respondent*.

Petition for Writ of Certiorari to the Circuit Court of Appeals of the United States for the Fourth Circuit.

PETITION FOR WRIT OF CERTIORARI.

FRANK P. FISH and
EDWARD S. ROBERTS,
Solicitors for Petitioners.

FREDERICK P. FISH,
Of Counsel.

IN THE

Supreme Court of the United States.

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THE HART STEEL COMPANY and GUILFORD S. WOOD, *Petitioners,* *vs.* THE RAILROAD SUPPLY COMPANY, *Respondent.*	Petition for Writ of Certiorari to the Circuit Court of Appeals of the United States for the Seventh Circuit.

PETITION FOR WRIT OF CERTIORARI.

To the Honorable the Justices of the Supreme Court of the United States:

Petitioners, The Hart Steel Company and Guilford S. Wood, present this petition for a writ of certiorari, directed to the Circuit Court of Appeals, for the Seventh Circuit, and ask for relief in a situation in which (1) two Circuit Courts of the United States have, in litigation based upon alleged infringement of three certain Letters Patent relating to railway tie plates (metallic plates inserted between the rails and ties) with records identical as to Letters Patent and claims asserted to be infringed, alleged infringing devices, evidence, exhibits and arguments, both decided that the said Letters Patent were not infringed by the same device, and in which (2) the Circuit Court of Appeals for the Sixth Circuit,

on appeal from one of said Circuit Court decisions agreeing with said Circuit Courts as to non-infringement, has further decided that the claims of said Letters Patent alleged to be infringed were void for want of novelty and patentable invention, while (3) the Circuit Court of Appeals for the Seventh Circuit, on appeal from the decision of the other Circuit Court upon the same Letters Patent and claims, and with identical alleged infringing device, evidence, exhibits and records, sustained the validity of said claims of said Letters Patent and held infringement thereof. (4) Said litigation was between parties substantially identical and in privity, and the defence in each case was conducted, with the knowledge of the common complainant, at the expense of and by a third party, the Atchison, Topeka and Santa Fe Railway Company, purchaser and user of the alleged infringing device. Said Railway Company was not made a party defendant of record in either instance, but assumed and conducted the defence in both suits by reason of a guaranty given the defendants in said proceedings against liability for infringement of Letters Patent and is thereby bound by each of said decisions. In support of said assertions petitioners state and show the following facts:

1. On December 9, 1908, The Railroad Supply Company, Respondent, instituted in the then Circuit Court of the United States, for the Northern District of Illinois, a suit against The Hart Steel Company and Guilford S. Wood, Petitioners, alleging infringement of certain claims of three certain Letters Patent for railway tie plates by reason of *the sale* to the Atchison, Topeka and Santa Fe Railway Company of five thousand tons of tie plates manufactured by the Elyria Iron and Steel Company and sold through and by the Hart Steel Company (Guilford S. Wood, Manager), as selling agent of

said manufacturer and received by the said Atchison, Topeka and Santa Fe Railway Company and installed in the tracks of said Railway Company at various points in various states. A joint and several answer was filed by petitioners, denying infringement and alleging the invalidity of the patents and claims thereof alleged to be infringed, for lack of novelty and patentable invention and for lack of patentable combination, and also denying infringement; evidence was taken on behalf of all the parties thereto, and said suit, after elaborate oral arguments and briefs, was dismissed for want of equity on December 28, 1911, by the Honorable Christian C. Kohlsaat, who held that if the claims alleged to be infringed were given a broad construction the same would be void for lack of novelty, and if given a construction necessitated by the state of the art and prior devices patented or used, there was no infringement thereof by the device made and sold. A copy of said opinion attached hereto, marked Exhibit "A," and made a part hereof, is reported as *The Railroad Supply Co.* v. *The Hart Steel Co.*, et al., 193 F. R. 418. An appeal was taken from said decree of dismissal to the said Circuit Court of Appeals for the Seventh Circuit in December, 1911, and from time to time continued until November 10, 1914, when the same was, after oral argument, taken under advisement until January 5, 1915.

2. On March 26, 1909, a suit in equity was instituted by said Railroad Supply Company in the then Circuit Court of the United States for the Northern District of Ohio, Eastern Division, against the said Elyria Iron and Steel Company for alleged infringement of the same claims of said Letters Patent by the *manufacture and sale* of the *said five thousand tons of railway tie plates* which were through petitioners as selling agents, as aforesaid, sold and delivered to the said Atchison, To-

peka and Santa Fe Railway Company, and which *sale* was the basis of the aforesaid suit against petitioners. After answer filed setting up the same defences of invalidity, want of patentable combination, and non-infringement of the said claims of said Letters Patent sued upon, as in said Illinois suit, and the *same evidence* taken on behalf of all parties, and upon oral arguments and briefs filed and advisement, said suit was on or about the 4th day of March, 1912, by the Honorable William L. Day, then Judge of said Court, dismissed for want of equity upon substantially the same grounds as set forth in the opinion of the said Honorable Christian C. Kohlsaat annexed as Exhibit "A" hereto. A copy of said opinion is annexed hereto, marked Exhibit "B," and made a part hereof.

3. Said Railroad Supply Company thereupon took and prosecuted an appeal from said last named decision to the Circuit Court of Appeals for the Sixth Circuit, which said court, after due argument and consideration upon briefs, on the 7th day of April, 1914, affirmed the decree dismissing said suit, adopting with approval the views of Judges Day and Kohlsaat as to non-infringement, and also holding and adjudging each and all of said claims in said Letters Patent alleged to be infringed to be null and void for lack of patentable novelty and invention. A copy of said opinion, annexed hereto, marked Exhibit "C," and made a part hereof, is reported as *The Railroad Supply Co.* vs. *Elyria Iron & Steel Co.*, 213 F. R. 789. Thereupon a petition for rehearing was filed in said Circuit Court of Appeals for the Sixth Circuit by said Railroad Supply Company, which, after due consideration, was denied by said Court and a mandate issued to the District Court of the United States for the Northern District of Ohio, Eastern Division, directing the affirmance of said decree of dismissal,

and said mandate was issued and filed and said decree remains in full force and effect.

4. Said appeal from the said decree of dismissal by said Honorable Christian C. Kohlsaat in said Illinois suit, appearing upon the trial calendar for the October Term, A. D. 1914, of said Circuit Court of Appeals for the Seventh Circuit, petitioners on October 6, 1914, presented a motion for affirmance of said decree of dismissal based upon the said action of the said Circuit Court of Appeals for the Sixth Circuit as *res judicata* on account of identity of issues and subject matter and identity and privity of parties. Said motion for affirmance was overruled by said Seventh Circuit Court of Appeals, and after oral argument on November 10, 1914, and submission upon briefs, said Circuit Court of Appeals for the Seventh Circuit on January 5, 1915, reversed the decree of the said Circuit Court of the United States in this proceeding, and held each and all of the claims of said Letters Patent in issue valid and the device of defendants therein an infringement of said Letters Patent. A copy of said opinion is annexed hereto, marked Exhibit "D," and made a part hereof.

5. Both of said suits were based upon alleged infringement of certain claims of Letters Patent, known as Wolhaupter Patents, relating to railway tie plates, which are as follows:

The eighth claim of Letters Patent for tie plates issued to Benjamin Wolhaupter on May 7, 1895, and Numbered 538,809, reading:

> "A railway tie plate formed on the under side with devices more or less sharpened adapted to penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests, substantially as described."

Claims one, two and three of Letters Patent for railway tie plates, dated January 14, 1902, to Benjamin Wolhaupter, Numbered 691,332, reading:

> "1. A railway tie plate provided on its upper side with one or more flanges on which the rail may rest or by which it is directly sustained and on the under side with one or more tie engaging flanges extending parallel with the upper flanges and directly beneath the latter, substantially as described.
>
> "2. A railway tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained and on the under side with one or more tie engaging flanges extending parallel with the upper flanges and directly beneath the latter and sharpened to permit them to readily enter the tie, substantially as described.
>
> "3. A railway tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained, on the under side with one or more sharpened tie engaging flanges extending parallel with the upper flanges and directly beneath the latter, and on the upper side with an additional flange or flanges extending above the plane of the rail sustaining flanges and adapted to receive the lateral thrust of the rail, substantially as described."

Claims seven and nine of Letters Patent to Benjamin Wolhaupter, dated February 24, 1903, and Numbered 721,644, for improvements in tie plates, reading:

> "7. A tie plate provided in its rail supporting surface with transverse grooves or channels and at one margin of said supporting surface with a transverse rail abutting shoulder.
>
> "9. A tie plate provided in its rail supporting surface with transverse grooves or channels, reaching to the edge of the plate, and at one margin of said surface a transverse rail abutting shoulder."

6. The bills of complaint in both instances were identical except as to parties defendant. In the Ohio case the Elyria Iron and Steel Company was made defendant as the maker and seller of, and the infringement

shown was the *manufacture and sale of the five thousand ton lot of the alleged infringing tie plates;* and in the Chicago case The Hart Steel Company as sales agent of the Elyria Iron and Steel Company, and Guilford S. Wood as its representative, were made defendants, and the infringement shown was the *sale by petitioners as selling agents of the same five thousand tons of alleged infringing tie plates.* The manufacture by the Elyria Iron and Steel Company of said five thousand tons of tie plates, the sale thereof by The Hart Steel Company, and Guilford S. Wood as sales agents or representatives of the Elyria Iron and Steel Company to, and the purchase, receipt and use thereof by, the Atchison, Topeka and Santa Fe Railway Company were conceded and stipulated in both records. The evidence in both suits was identical except as to the names of the parties, a carbon copy of all the evidence taken in the Illinois suit being certified and filed in the Ohio suit. The exhibits in the two cases were also identical. Copies of the Letters Patent above referred to are annexed hereto, marked Exhibits "E," "F" and "G" and made a part hereof, (the claims alleged to be infringed being italicized) and a reproduction of the alleged infringing device, which was the form used for the said five thousand tons of tie plates, is also annexed hereto, marked Exhibit "H," and made a part hereof. It was shown of record in both suits and admitted that the Elyria Iron and Steel Company, an Ohio corporation, was engaged in the manufacture of tie plates and made the alleged infringing plates at Elyria, Ohio, and that the Hart Steel Company, a New York corporation, with offices at Chicago, New York, Elyria, Ohio, Atlanta, Ga., and San Francisco, Cal., was the selling organization for tie plates of the Elyria Iron and Steel Company; that its capital stock was all owned

by the Elyria Iron and Steel Company, and that the two companies had common officers. Petitioner Guilford S. Wood is the representative of The Hart Steel Company at Chicago, Illinois. It was also claimed by The Railroad Supply Company at all times and was stipulated of record that prior to the said manufacture, sale and purchase of the said five thousand tons of tie plates, the alleged infringing character whereof was the basis of both suits, to the Atchison, Topeka and Santa Fe Railway Company, that the Railway Company agreed to protect The Hart Steel Company against any possible litigation for infringement of Letters Patent and that any infringement suit was to be handled under the direction of the Railway Company and by its attorney. This guaranty, as a matter of fact, included the Elyria Iron and Steel Company, the Hart Steel Company and Guilford S. Wood, and was so construed and interpreted by all the parties and the expense and conduct of both of said suits have been at all times, with the knowledge, consent and approval of all said defendants, and each of them, at the cost of and under the direction and control of said Atchison, Topeka and Santa Fe Railway Company, which facts have been at all times well known to the Railroad Supply Company, complainant.

7. As aforesaid, after the rendition and entry of the decree of affirmance by the Circuit Court of Appeals for the Sixth Circuit and issuance and filing of the mandate thereon in the lower court, petitioners submitted a motion in the Circuit Court of Appeals for the Seventh Circuit, asking affirmance of the decree of dismissal on the ground of *res judicata* by reason of the practical identity of and privity between the Elyria Iron and Steel Company, The Hart Steel Company and Guilford S. Wood and the com-

mon defence of the proceedings by the Atchison, Topeka and Santa Fe Railway Company. Petitioners claimed that, as shown by the record, there was such identity of issues, evidence and subject matter and such identity and privity of parties in the two proceedings, that the decree of the Circuit Court of Appeals for the Sixth Circuit had become and was determinative of all issues and binding upon the Railroad Supply Company as party complainant in both suits, because of the facts, at all times known to The Railroad Supply Company, of the defence by the Atchison, Topeka and Santa Fe Railway Company of both suits and the practical identity between the Elyria Iron and Steel Company and The Hart Steel Company and relation of principal and agent between said Companies, and the identity of the alleged infringing manufacture and sale. Said Circuit Court of Appeals for the Seventh Circuit, however, denied said motion and proceeded to a consideration of the record and case *de novo*, resulting in the reversal of the decree below, the sustaining of the validity of the patents, finding of infringement, the direction of an accounting upon the first Letters Patent sued on, which have expired pending the suit, and direction for an injunction and accounting upon the two latter patents sued upon, all of which were sustained and found to be infringed.

8. Petitioners show that while the aforesaid sale of said 5000 tons of tie plates was arranged and effectuated by the Hart Steel Company, Guilford S. Wood, Chicago representative, as agent of the Elyria Iron & Steel Company, the contract therefor was taken in the name of the Elyria Iron & Steel Company and the tie plates after manufacture by it were billed directly by the Elyria Iron & Steel Company to the Railway Company and the purchase price paid directly to

said Elyria Iron & Steel Company, the said Hart Steel Company acting in all said transactions simply as the selling agent in the department for tie plates of the Elyria Iron & Steel Company.

9. Petitioners state that the said five thousand tons of tie plates, the sale of which is charged to have been and was found by the Circuit Court of Appeals for the Seventh Circuit to constitute an infringement of said claims of said Letters Patent, were received by the Atchison, Topeka and Santa Fe Railway Company shortly after the sale thereof in the latter part of 1908, and thereupon distributed and placed in the railroad tracks of said Railway Company at various points and still are in use to a large extent if not entirely; that under the decision of the Circuit Court of Appeals for the Sixth Circuit the said Elyria Iron and Steel Company is free to manufacture, sell and use and purchasers from it are free to use tie plates of the form and shape embodied in the said five thousand tons of tie plates so manufactured, sold and used aforesaid, and the said Atchison, Topeka and Santa Fe Railway Company is free to use the said five thousand tons of tie plates and also tie plates of the same form; and petitioners as agents of said Elyria Iron and Steel Company are free to sell tie plates of said form, yet under the decision of the Circuit Court of Appeals for the Seventh Circuit petitioners cannot lawfully sell tie plates of the said form, nor can the Atchison, Topeka and Santa Fe Railway Company, bound by said last named decree, use the said five thousand tons of tie plates now in track or tie plates of the same form, whether made by said Elyria Iron & Steel Company or by others. A decree entered pursuant to and as directed by the opinion of the said Circuit Court of Appeals for the Seventh Circuit, embodying injunction preventing the manufacture,

use or sale of tie plates of the form aforesaid, could be construed as binding not only upon petitioners but upon said Atchison, Topeka and Santa Fe Railway Company, and thus compel the said Railway Company to cease the use of and to remove, at great expense, trouble and loss, the said five thousand tons of tie plates wherever placed in its tracks, or be subject to attachment and punishment by the said court for failure to obey such injunction. Said decree would also operate to prevent, as your petitioners apprehend, the further sale or attempt to sell tie plates of the form aforesaid by petitioner the Hart Steel Company not only in said Seventh Circuit comprising states of Wisconsin, Illinois and Indiana, but in any part of the United States. Thus, by the decision of the Circuit Court of Appeals for the Sixth Circuit, the Elyria Iron and Steel Company and petitioner, the Hart Steel Company, as its selling agent, are free to make, use and sell tie plates of the form aforesaid and the Atchison, Topeka and Santa Fe Railway Company is free to purchase and use such tie plates and to continue the use of the said five thousand ton lot already purchased, while, under the order and judgment of the Circuit Court of Appeals for the Seventh Circuit, no one of said parties may lawfully make, sell or use such tie plates, and each may be subjected to attachment and punishment for violation of the injunction.

10. There is thus presented a state of affairs in which (1) two Circuit Courts of Appeals have come to directly opposite conclusions as to the validity and infringement of the same claims of said three Letters Patent, one of which has expired pending the litigation, one of which has four years, and the other of which has five years to run, and during which the injunction directed by the said Circuit Court of Appeals for the Seventh Circuit will be in force against petitioners and against the

said Atchison, Topeka and Santa Fe Railway Company, and there is presented the further condition, (2) that while under the decree and opinion of the Circuit Court of Appeals for the Sixth Circuit the said Elyria Iron and Steel Company is free to manufacture, sell and use and authorize others to use tie plates of the form aforesaid, your petitioner, the Hart Steel Company, its selling agent or department, will be subject to attachment and punishment for contempt in said Seventh Circuit Court for selling or attempting to sell tie plates produced by the said Elyria Iron and Steel Company of the form aforesaid, and (3) that while said Atchison, Topeka and Santa Fe Railway Company, under the said decree of the said Circuit Court of Appeals for the Sixth Circuit is free to use tie plates of the form aforesaid, both as a purchaser from said Elyria Company and as in privity to the suit, said Railway Company cannot, under the decree of the said Circuit Court of Appeals for the Seventh Circuit, purchase, use, or continue the use of the same, either in the states comprising the Seventh Circuit or at any place without liability for attachment and punishment for violating the said injunction recommended and directed by the said Circuit Court of Appeals for the Seventh Circuit.

11. Railway tie plates are steel plates placed on railroad ties beneath the rails to sustain and prevent lateral movement of the rails and lessen wear and abrasion of the ties, and are of great importance in the construction, maintenance and operation of railroads and are now used in some form or another by practically all railroads, and the use thereof is bound to increase because of the increased weight of rails and rolling stock, increased speed of trains and the difficulty of procuring hard wood for railway ties. The form of tie plates embodied in the device sold by defendants is a practical

and valuable form, which petitioners claim was actually devised, as shown by the record in this case, not by The Railway Supply Company or Benjamin Wolhaupter, the patentee, or at their suggestion, or by any person connected with either, but by railway engineers without any actual knowledge of or reference to said Wolhaupter Letters Patent, and as said form includes the use of side top shoulder flanges to prevent lateral movement of the rail, channeling the upper surface to obtain lightness without loss of strength, and the use of lower tie engaging projections to prevent movement of the plate, and as an injunction issued in the form recommended and directed by the Circuit Court of Appeals for the Seventh Circuit will practically prevent in tie plates the use of upper side flanges or shoulders, upper bearing flanges or ridges with channels between, and lower tie engaging projections and also the use of upper side shoulder flanges and upper surface transverse channels without the lower tie engaging projections, the result will be practically to give a monopoly for the use of tie plates exhibiting the elements of side top shoulder upper surface flanges and channels and lower tie penetrating devices in tie plates to the Railroad Supply Company for the ensuing five years.

12. Petitioners file herewith a duly certified copy of the record and proceedings in said Circuit Court of Appeals for the Seventh Circuit and show that there is error therein and that said Circuit Court of Appeals for the Seventh Circuit committed error in its judgment and decree therein as follows:

(a) In reversing said decree of the said Circuit Court of the United States dismissing said suit for want of equity.

(b) In sustaining and holding valid the said specified claims of said three Letters Patent to-wit: Claim 8 of

No. 538,809, claims 1, 2 and 3 of No. 691,332 and claims 7 and 9 of No. 741,644, claimed to be infringed, and each thereof.

(c) In refusing to hold and in not holding said claims of said letters patent specified, and each thereof invalid and void for want of patentable combination between the parts thereof as claimed.

(d) In refusing to hold and in not holding said claims of said letters patent specified, and each thereof anticipated, invalid and void for want of invention and patentable novelty.

(e) In holding that the said tie plate device employed by defendants was an infringement of said specified claims of said Letters Patent, or any thereof.

(f) In not affirming the decree of the Circuit Court of the United States dismissing said suit for want of equity.

(g) In holding that the tie plates sold by petitioners were an infringement of and in directing an accounting for the alleged infringement of said eighth claim of said first named Letters Patent. (No. 538,809.)

(h) In holding that the tie plates sold by petitioners were an infringement of, and in directing an injunction based upon and an accounting for the alleged infringement of said specified claims in said two remaining Letters Patent (Nos. 691,332 and 721,644), and each and all thereof.

(i) In denying and overruling said motion of petitioners to affirm said decree of said Circuit Court on motion of petitioners upon the opinion and decree of the Circuit Court of the United States as *res judicata.*

(j) In not granting said motion of affirmance on the ground of *res judicata.*

(k) In directing a decree against petitioners for costs of said suit and proceeding.

WHEREFORE, petitioners respectfully pray that a writ of certiorari may be issued out of and under the seal of this Court, directed to the United States Circuit Court of Appeals for the Seventh Circuit, commanding said Court to certify and send to this Court on a day certain to be therein designated a full and complete transcript of the record of all proceedings of said Circuit Court of Appeals in said cause therein, entitled The Railroad Supply Company vs. The Hart Steel Company and Guilford S. Wood, No. 1886, to the end that said cause may be reviewed and determined by this Court in accordance with the statutes in such case made and provided; that if necessary the issuance of the mandate in said Circuit Court of Appeals in said cause be stayed until the further order of this Court, and that petitioners may have such other and further relief or remedy in the premises as to this Court may seem appropriate and in conformity with law and that the decree of said Circuit Court of Appeals for the Seventh Circuit in said cause, and each and every part thereof, may be reversed by this Honorable Court and thus your petitioners will ever pray, etc.

HART STEEL COMPANY,
By FRANK F. REED, *its Attorney and Solicitor*
and GUILFORD S. WOOD,
Petitioners.
FRANK F. REED,
EDWARD S. ROGERS and
FREDERICK P. FISH,
Solicitors and of Counsel for Petitioners.

STATE OF ILLINOIS, } ss.
COUNTY OF COOK. }

FRANK F. REED, being duly sworn, deposes and says that he is the solicitor and of counsel for The Hart Steel Company and Guilford S. Wood, the petitioners herein; that he has read the above and foregoing petition for writ of certiorari and knows the contents thereof, and that the same is true to the best of his knowledge and belief, except as to the matters therein stated to be alleged upon information and belief, and as to such matters he believes them to be true, and that said petition is in his opinion well founded in law as well as in fact.

(Signed) FRANK F. REED.

Subscribed and sworn to before me this 12th day of February, A. D. 1915.

MARGARET SHEALY,

(NOTARIAL SEAL) *Notary Public.*

EXHIBIT A.

RAILROAD SUPPLY CO. v. HART STEEL CO., *et al.*

(193 Fed. Rep. 418).

(Circuit Court, N. D. Illinois, E. D. December 28, 1911)

No. 29,294.

In Equity. Suit by the Railroad Supply Company against the Hart Steel Company and Guilford S. Wood. On final hearing. Decree for defendants.

Taylor E. Brown (C. C. Linthicum, C. Clarence Poole, and Clarence E. Mehlhope, of counsel), for complainant.

Frank F. Reed, Edward S. Rogers, and James Negley Cooke (Frederick P. Fish, of counsel), for defendants.

KOHLSAAT, Circuit Judge. Complainant seeks herein to restrain infringement of: (Claim 8 of patent No. 538,809, granted May 7, 1895, to B. Wolhaupter; (2) claims 1, 2 and 3 of patent No. 691,322, granted January 14, 1902, to same; and (3) claims 7 and 9 of patent No. 721,644, granted February 24, 1903, to same, all for railway tie-plates. They read as follows, viz:

'8. A railway tie-plate formed on the under side with devices more or less sharpened, adapted to penetrate and engage the tie and on its upper side with a series of flanges on which the rail rests, substantially as described.'

'1. A railway tie-plate provided on its upper side with one or more flanges on which the rail may rest or by which it is directly sustained and on the under side with one or more tie-engaging flanges, extending parallel with the upper flanges and directly beneath the latter, substantially as described.

'2. A railway tie-plate on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained and on the under

side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter and sharpened to permit them to readily enter the tie, substantially as described.

'3. A railway tie-plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained, on the under side with one or more sharpened tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, and on the upper side with an additional flange or flanges extending above the plane of the rail-sustaining flanges and adapted to receive the lateral thrust of the rail, substantially as described.'

'7. A tie-plate provided in its rail supporting surface with transverse grooves or channels, and at one margin of said supporting surface with a transverse rail abutting shoulder.

'9. A tie-plate provided in its rail supporting surface with transverse grooves or channels, reaching to the edge of the plate, and at one margin of said surface a transverse rail abutting shoulder.'

In substance the subject-matters of the said several patents, so far as here involved, are as follows, viz:

Claim 8, aforesaid, covers a tie-plate with more or less sharpened depending tie-engaging projections on its under side to supplement the spikes, and having on its upper face a series of flanges on which the rail rests.

Claims 1, 2 and 3, aforesaid, call for a tie-plate of the same general construction as that of said claim 8 having on its lower or under side tie-engaging projections parallel and in perpendicular alignment with the flanges in its upper surface, i. e., transverse the rail, and having an additional flange on one or both outside edges of its upper face, extending above the other flanges and parallel therewith, and adapted to receive and resist the lateral thrust of the rail.

Said claims 7 and 9 call for a tie-plate having grooves in its upper surface transverse the tie and extending to

the outer edge of the plate, running parallel to the rail and provided at one margin to its upper surface with a rail-abutting shoulder extending parallel to the rail.

Defendant is charged with the appropriation of the substance of each of the foregoing claims in the construction of the combination constituting its tie-plate, having the corrugated top surface and the more or less sharpened tie-engaging flanges of claim 8, the alignment of the upper and lower flanges as in claims 1, 2, and 3, and the rail-abutting transverse shoulder of claims 7 and 9. Each of these elements, defendant insists, is found in the prior art. The defenses relied on are want of patentable novelty in view of the state of the art, and noninfringement.

It is contended that the corrugated rail-supporting surface of the device of claim 8 presents a much longer lived tie-plate than does the flat surfaced tie-plate which preceded it. That the furrowed surface had some advantage over the flat rail supporting face, seems to be fairly well established. It undertakes to make provision for the elimination of moisture, which corrodes, and sand and other gritty substances, which abrade the tie-plate and tie, so that, for the purposes of this suit, the utility of such a device must be conceded. The under tie-engaging flanges prevent movement of the plate upon the tie, and are concededly useful. Were further evidence of these facts necessary, it may be found in the disclosure of the record with regard to the use to which the device of the patents in suit has attained.

As a matter of first impression, it would seem as though the features of the claims alleged to be novel could be little more than the result of mechanical skill —something that the railroad building art must suggest. They must, however, be viewed in the light of the art as

it stood at the time of the several alleged inventions in suit.

In the early days of railroading, engines and cars were light. Rails were laid upon and spiked into the ties or into wooden plates. As the weight and speed of trains and rail manufacturing facilities increased, it was found that this was not a safe or economical means for holding the rails in place. Flat plates of iron or steel construction came into use. It is estimated that at the present day a first-class engine weighs more than ten times as much as did one of the first commercial engines. The great increase in traffic demanded increase in the carrying capacity of the cars. This in turn demanded the strengthening of the tracks. To this end, inventors have been active in devising, among numerous other track strengthening devices tie-plates which should meet the demands of increased strain upon the tracks and prevent as far as possible the destruction of railroad ties; the demand for the latter being such as to threaten the supply. Thus it was that the pressure for improvement in tie-plates became very great.

The specification in patent No. 538,809, aforesaid (lines 13 to 49 inc., p. 1), reads as follows, viz:

> 'Heretofore in the use of railway tie-plates two general styles of plates have been employed. The plates were first put into use without top flanges, that is, flanges on the top of the plate against which the rail flange could abut and the plate thereby be utilized to prevent the lateral movement of the rail and consequent widening of the gauge; but in the use of these smooth top plates it was found that the constant thrusts of the rail laterally tended to shear the spike, and the latter had to be frequently renewed. To relieve the spike and obviate this item of renewals the plate was provided with a top ridge or flange against which the rail flange could bear; the flanges on the under side of the plate which engaged the tie supposedly holding the plate against

any movement along the tie, and the plate thereby relieving the spikes from the shearing action of the rail caused by its lateral thrust. But in the use of these plates with top flanges it has been found that the lateral thrust of the rail has caused the flanges on the under side of the plate to break or compress the wood fibres and allow the plate to creep along the tie longitudinally thereof. When the plate has once moved, it has been practically impossible to again hold the top flange against the rail flange after the rail has been returned to its original and proper position, since the under flanges have no wood to abut against; the result being that, even with the top flange on the plate, the spike has had to take the thrust of the rail after the plate has been in use a short time, thus rendering useless this top flange and soon shearing the spike.'

From the record it appears that, as to said claim 8, the prior art is, substantially to be found in the following patents:

The railway chair of Wells patent, No. 203,570, granted May 14, 1878, disclosing a device having an underneath rectangular shaped projection or flange intended to be sunk in a channel cut into the tie and upper flanges upon which the rail rests, the grooves of which serve to lighten the device and afford protection from grit and moisture. This chair is meant to hold the ends of the rails. It extends over several ties. Complainant insists the chair is not in the tie-plate art. So far, however, as it makes public features bearing upon claims in suit, aforesaid, it will be proper to consider it.

Hudson patent, No. 142,020, granted August 19, 1873, which discloses a tie-plate with a channel on its upper face arranged to receive a flange in the bottom of the rail, shoulders on the outer edge of the upper face, embracing the rail-base on both edges and a rectangular projection or flange on its under side directly beneath

its upper channel, designed to prevent shearing of the spikes and creeping of the plate.

Gould patent, No. 280,030, granted June 26, 1883, for railroad plate provided with two or more V-shaped metal flanges, or beads in its under side, which will readily be imbedded in the tie, and which has one or more longitudinal grooves on its top or face surface to receive corresponding ribs or flanges on the bottom of the rail and on one edge of a shoulder. A rubber cushion is provided on the under side, between the grooves or flanges.

Dunham patent No. 469,386, granted February 23, 1892, which shows a corrugated tie-plate, both sides or faces being corrugations, thus providing for protection against moisture and sand.

Goldie patent, No. 485,030, granted October 25, 1892, for a tie-plate. This device has a slightly concave top face centrally located and a convex under face. The base of the rail rests practically on the plain surface at the sides of the depression, leaving an opening under and parallel to the rail. There are more or less sharpened flanges on the under side which penetrate the rail. A shoulder extending across the plate near one edge of the top surface resists side thrust. While not mentioned in the patent, it is evident that this tie-plate will take care of moisture and grit.

Service patent, No. 249,407, granted November 8, 1881, reissue 10,302, reissued April 3, 1883, and No. 294,816, granted March 11, 1884, for a wear plate, all show tie-plates having flanges on their under faces and flat upper faces.

In Reece patent, No. 494,692, granted April 4, 1893, is shown a tie-plate which has more or less sharpened flanges on its under face and portions upon its upper face equivalent to raised ribs upon which the rail rests

and also rail-abutting shoulders. The portions upon which the rail rests are produced by cutting out the metal from a plane top face, so as to leave ribs or strips of metal with opening through to the tie, as in Fig. 2 of the patent.

Holmes patent No. 495,807, granted April 18, 1893, shows substantially the same tie-plate without the openings.

The patent to Churchward, granted November 7, 1893, and numbered 508,086, calls for a wear plate for railroad ties, having a flat rail supporting surface flanked by two transversely ranging rail-abutting shoulders and an under surface provided with transversely ranging and sharpened, tie-engaging ribs or flanges.

Worthington patent, No. 506,963, granted October 17, 1893, for method of making railroad tie-plates, shows a plate formed 'with longitudinal ribs on both of its faces and then planing or cutting away parallel sections of the ribs upon one face of the plate to form the seat and abutments for the foot flange of the rail.' This device, as first prepared and before cutting away, is the device of claim 8 and claims 1 and 2 aforesaid.

Avery patent, No. 574,773, granted January 5, 1897, for a railway tie-plate, covers a device which has rail-supporting ribs on its upper face connected near their ends by transverse raised portions or narrow ribs, thereby forming a trough between each set of supporting ribs. At the bottom of this trough, and adjoining the inner face of the transverse end ribs, a tongue of metal is cut and turned down, thereby constituting downward projecting teeth, which engage the tie much as shown in Wolhaupter patent, No. 579,509, Fig. 2, granted March 23, 1897. When the tie-plates are cast, the tie-engaging 'tongues are cast integral with the plate.' One object

of this construction, it is stated, is to prevent the entrance of water and dirt between the plate and the tie. The troughs above referred to must be completely covered by the bottom flange of the rail in order to exclude moisture and grit. At line 41, p. 2, it is said:

> "A boss or lug E, or two lugs, may be formed on the top of one or more of the ribs to serve as abutments for the rail flange and prevent its lateral movement. These lugs may be pressed upward if the plate is made of wrought metal, or may be cast on, if made of cast metal."

The lugs serve the same purpose as a shoulder.

Various other patents, such as Reece patent, No. 488,662 for wear plate; Clark patent, No. 529,854, granted November 27, 1894; Reece patent, No. 541,984, granted July 2, 1895; Churchward patent No. 492,528, granted February 28, 1893, for a wear plate, having sharpened under flanges and a plain upper face with a shoulder; patent No. 506,963, granted to Worthington for making tie-plates, October 17, 1893; Holmes patent, No. 514,465, granted February 13, 1894, for a tie-plate; patent to Clark, No. 529,854, granted November 27, 1894, for a tie-plate, and others, together with certain publications, disclose devices more or less resembling those in suit.

From the foregoing, it appears that tie-plates having flanged under faces more or less sharpened to engage the tie were old when claim 8 was applied for; also, that devices having flat tops, except a rail-abutting shoulder, and more or less sharpened under flanges, were also old; that tie-plates having channels and attendant flanges, or projections and shoulders on their upper faces, and rectangular projections or flanges on their under sides, were old.

The device of claim 8 differs from the device of the Dunham patent only in its under flanges being more or less sharpened.

It also appears that tie-plates having upper and lower flanges, both parallel with the rail and those transverse thereto, were old. In the Goldie patent, the depression made in the center of the plate is alleged by the patentee to be for the purpose of receiving the more or less rounded portion of the center of the rail foot or base. Fig. 2 shows a clear opening under the rail base, with the flanges of the base resting on those parts of the tie-plate not included in the concave center but immediately adjacent to and upon both sides of such center depression. The effect of this would be to provide flanges on the upper face of the tie-plate upon which the rail rests. As said above, Goldie lays no claim to this feature of his device. As a witness for complainant he pronounces his device a failure. Inasmuch as his device has gone to the general public by expiration of his patent, his statement cannot prevail as an admission. The space under the rail in Fig. 2 would be ample for the collection and removal of moisture and grit from the plate. It is apparent that the bearing rib or section of this tie-plate is above and in vertical alignment with the more or less sharpened flanges on the under face of the plate, as in the second patent in suit; so that if the Goldie depression is equivalent to the channels which produce the rail-bearing flanges of claim 8, then, whether claimed or not by Goldie, Wolhaupter was not the first to discover a 'tie-plate formed on the under side with devices, more or less sharpened, adapted to penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests,' substantially as described in the first patent in suit. The alleged object of the device of claim 8 is to secure lightness, cheapness, strength, protection from moisture and grit, and to prevent creeping of the plate. All of these are secured in the Reece patent above set out.

Such being the state of the art, complainant's invention, as disclosed in claim 8, must be limited to the particular form of tie-plate shown in the drawing with only a very limited right to equivalents, if any. Under the state of the art, there could be no novelty in extending the lower flanges parallel with the grain of the tie. Goldie, Dunham, Reece, and others have the same arrangement. Wolhaupter prefers his plate formed into a trussed shape, but does not limit himself to that form. He claims a strong plate, since each point where the rail rests upon the plate is supported and trussed by metal which is more or less on edge instead of on its side, thereby forming for each resting point of the rail two girders C^7 joined at the apex by the top flanges C^4 where the rail rests.

If the device of claim 8 is to be compared separately with defendants' alleged infringing tie-plate, it is evident that the latter lacks the under side flanges formed so as to give an arch effect or support to the tie-plate. Its under face is flat with V-shaped dependings projections in more or less perpendicular alignment with the upper face raised portion thereof. Its upper flanges, if they may be so termed, run parallel to the rail and transverse the tie as do its under flanges. While those of claim 8 run transverse the rail and parallel to the grain of the tie, other differences are disclosed, so that were the two to be placed in conflict infringement would not be deemed established, in view of the state of the art.

Compared with claims 1, 2, and 3 of patent No. 691,332, it will be seen that the under flanges of defendant are located with respect to the upper rail rests, the same as in Goldie, Reece, and Wolhaupter, provided the upper rail rests may be termed flanges in Reece and Goldie. Defendant's shoulder is that of Goldie, whereas the shoulder device of claims 3 is practically that of Reece. It lacks

also the punched out teeth of Wolhaupter as shown in the specification. Were these two devices here in suit alone, infringement could not be decreed in view of the condition of the art at date of patent.

Considering defendant's device in comparison with claims 7 and 9 of patent No. 721,644, it appears that it comes so far as the said claims go within the language thereof. It has the transverse grooves reaching to the edge of the plate on its rail-supporting surface and also the transverse rail-abutting flange. As above stated, the only improvement of claims 7 and 9 deemed necessary to consider here is the rail-abutting shoulder. The language of these claims is broad enough to include any tie-plate having such a shoulder in connection with grooves on its upper face. Patent to the same Wolhaupter No. 579,509, aforesaid shows substantially this same arrangement of grooves on the upper face of a railroad tie-plate in combination with a shoulder or rail-abutting flange. It is found in Goldie patent, aforesaid. If it is to be construed so as to include defendant's tie-plate, it must be held to be invalid. This, however, is not necessary. There seem to be few lines of the inventive art which have been so diligently followed up as the tie-plate. The minutest advances have been recognized by the Patent Office. It is therefore not deemed necessary to hold this third patent invalid, for what it calls for as limited by the prior art.

It is the judgment of the court that defendant's device does not infringe any of the claims in suit in view of the state of the art. The bill will therefore be dismissed for want of equity."

EXHIBIT B.

IN THE UNITED STATES DISTRICT COURT.

Northern District of Ohio,

Eastern Division.

THE RAILROAD SUPPLY COMPANY, *Complainant,*
vs.
THE ELYRIA IRON AND STEEL COMPANY, *Defendant.*
No. 7668.

MEMORANDUM OPINION.

DAY, J.

This is a suit for an injunction to restrain the infringement of (1) claim 8 of patent No. 538,809, granted May 7, 1895, to B. Wolhaupter; (2) claims 1, 2 and 3 of patent No. 691,322, granted January 14, 1902, to B. Wolhaupter, and (3) claims 7 and 9 of patent No. 721,644, granted February 24, 1903, to B. Wolhaupter.

All these claims are for railway tie plates.

This patent has been before the United States Circuit Court for the Northern District of Illinois. The same claims were considered between the same parties on the same record, and I presume that practically the same arguments were presented. At that time the various claims were given very careful consideration by Judge Kohlsaat. I have carefully listened to the arguments of counsel, and given careful consideration to Judge Kohlsaat's opinion, and I am forced to reach the same conclusion as the learned judge did in the case before him in the Eastern Division of the Northern District of Illinois. I do not reach this conclusion by the application of any rule of comity, but after a consideration of the entire case.

I think that such a conclusion is well based upon the record, and furthermore that it should have a practical result. It is hard to see the necessity for repeated litigation in patent matters where ample opportunity is afforded in the jurisdiction where the suit was originally argued to resort to a court of appeals for a final and authoritative determination of the issues involved.

It is accordingly the judgment of the court that defendant's device does not infringe any of the claims in suit and the bill, therefore, will be dismissed for want of equity.

DAY,
Judge.

Cleveland, Ohio, March 4, 1912.

EXHIBIT C.

RAILROAD SUPPLY CO. v. ELYRIA IRON & STEEL CO.

(Circuit Court of Appeals, Sixth Circuit. April 7, 1914.)

No. 2322.

Appeal from the District Court of the United States for the Eastern Division of the Northern District of Ohio; William R. Day, Judge.

Suit in equity by the Railroad Supply Company against the Elyria Iron & Steel Company. Decree for defendant, and complainant appeals. Affirmed.

T. E. Brown, of Chicago, Ill. (C. C. Linthicum and Clarence E. Mehlhope, both of Chicago, Ill., of counsel), for appellant.

F. F. Reed and Edward S. Rogers, both of Chicago, Ill., and James Negley Cooke, of Pittsburgh, Pa. (F. P. Fish, of Boston, Mass., of counsel), for appellee.

Before WARRINGTON *and* DENISON, Circuit Judges, and SATER, District Judge.

SATER, District Judge. The plaintiff is the owner of the three Wolhaupter patents numbered 538,809, 691,332, and 721,644, issued May 7, 1895, January 14, 1902, and February 24, 1903, respectively. The evidence before us is said to be the same as that on which the case was heard not only in the District Court, but previously by Judge Kohlsaat, in Railroad Supply Co. v. Hart Steel Co., 193 Fed. 418. The trial court, as the result of an independent study, concurred in the conclusion reached in such reported case and dismissed the bill. The case stands for decision on appeal.

The plaintiff charges that the defendant, by its manu-

facture of certain tie plates and its sale of the same through a selling agent, the Hart Steel Company, to the Atchison, Topeka & Santa Fé Railroad Company, infringed claim 8 of the plaintiff's first patent, claims 1, 2, and 3 of its second patent, and claims 7 and 9 of its third patent. The respective claims so alleged to be infringed are as follows:

> "(8) A railway tie plate formed on the under side with devices more or less sharpened adapted to penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests, substantially as described."
>
> "(1) A railway tie plate provided on its upper side with one or more flanges on which the rail may rest or by which it is directly sustained, and on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, substantially as described."

Claim 2 is the same as claim 1, excepting it specifies by insertion after the word "latter" that the lower flanges are "sharpened to permit them to readily enter the tie."

Claim 3 is made different from claim 2 by adding before the words "substantially as described" the further element:

> "And on the upper side with an additional flange or flanges extending above the plane of the rail sustaining flanges and adapted to receive the lateral thrust of the rail."
>
> "(7) A tie plate provided in its rail supporting surface with transverse grooves or channels, and at one margin of said supporting surface with a transverse rail-abutting shoulder."

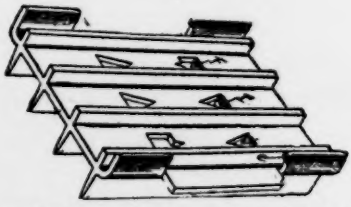
Excepting the limiting phrase, "reaching to the edge of the plate," added after the words "grooves or channels," claim 9 is the same as claim 7.

In support of its defense of noninfringement, the defendant avers: (1) That the state of the art and of tie

plate manufacturing on the respective dates on which the three letters patent were issued was such that each and all of them are void for want of novelty or invention; (2) that if, however, any patentable invention is disclosed in any one or more of the letters patent, the claims must be limited to the specific devices therein set forth, and cannot be so broadened as to include the defendant's tie plate; and (3) that there is no patentable combination shown in the specifications and claims of any of the letters patent, in that the different elements or parts which are claimed to be in combination are all old individually and collectively, and are mere aggregations, having no correlative or modified functions or action upon each other or any joint contributive action in producing any new result, either originally or in Wolhaupter's devices.

A cross-section or end view of the tie plate covered by the first of the patents in suit and drawings of the tie plates delineated and described in the second and third of such patents, respectively, are successively shown as follows:

Wolhaupter Device, First Patent.

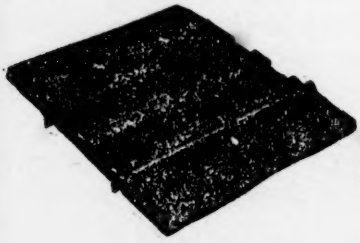


Wolhaupter Device, Second Patent.

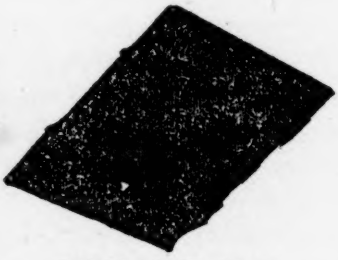
Wolhaupter Device, Third Patent.

The modified forms of the T-shaped plates appearing in the third patent, on account of their general resemblance to the form above shown, need not be reproduced.

The first of the next following illustrations represents a form of tie plate manufactured by the plaintiff for commercial use, and claimed by it to be within the terms of the patents and to be infringed; the second, that made by the defendant:



Plaintiff's Tie Plate.



Defendant's Tie Plate.

The form of plaintiff's commercial plate may be varied by the use of additional top surface grooves and rail sustaining flanges.

The primary question is the validity of the patents in suit. It is not necessarily the only question for decision, nor will the correspondence of defendant's device with some one or more of the claims in suit conclusively settle the question of infringement. Westinghouse v. Boyden Power-Brake Co., 170 U. S. 537, 568, 569, 18 Sup. Ct. 707, 42 L. Ed. 1136. In view, however, of the resemblance between the tie plates last above shown and of the manifest dissimilarity in appearance between the plaintiff's tie plates in commercial use and those shown and described in the drawings and specifications, the construction, whether broad or narrow, to be placed on the patents, if valid, becomes determinative of the rights of the litigants. The two questions are so

related and so dependent on the prior state of the art that a consideration of the one necessarily runs into that of the other. The transition from the relatively small and lightweight engines and cars which characterized early railroading to the larger, weightier, and speedier engines and heavier, more capacious, and more heavily loaded cars provoked activity among inventors in devising means, including railway chairs and tie plates, to prevent the spreading of the track, due to lateral strain, and the destruction of the tie from abrading and cutting action of the rail. Before Wolhaupter applied for the first of the patents in suit, tie plates had assumed, as regards their lower portions, two well-known styles or forms: (1) Those whose downward-extending ribs or flanges were adapted to enter the tie longitudinally and parallel with its grain, so as to separate, but not to cut, the fiber; and (2) those whose downward-projecting devices were so disposed as to extend transversely of the grain of the fiber, and, in consequence, to cut into and sever the same. The distinctive character of each of the forms and the theory of which it is expressive are recognized by Wolhaupter in his patent No. 530,738, issued in 1894, as well as by his predecessors, Reece and Servis, in their respective patents, No. 488,662, 1892, and No. 524,868, 1894. Those of the second form have, with substantial uniformity, employed but two shallow continuous lower ribs, excluding from consideration those on which mere projections are used. The apparent reason for adopting that form of construction is the relatively greater resistance of the transverse ribs not only to the force applied to imbed them in the ties, but also, on account of their pressure throughout their entire length against the compressed rail. With equal uniformity, patentees of plates of the or severed fiber, to the outward or lateral thrust of the

first form have called for more than two (i. e., a series of) lower flanges with comparatively sharp lower edges and of greater length in comparison with both the lower ribs of those of the first form and also the thickness of the body of the tie plate. Their greater number and greater length are designed to increase their resistance to the lateral pressure of the rail, such resistance being restricted to the friction of the fiber against their sides and its compression by their blunt ends. For his patent of 1894, and for each of those in suit, Wolhaupter chose a device of the first above-mentioned form. In that of 1895 he alludes to the further well-known classification of plates (whatever direction or character their flanges may assume) with reference to their top surfaces—those having such surfaces smooth and those having flanges to receive the outward thrust of the rail. As his patent betrays a knowledge of variously constructed plates then on the market, he might well have further recognized and specifically named those whose upper surface is grooved or channeled. Experience taught that the lateral thrust of the rail against the outer top flange of tie plates, having such, caused the under flanges engaging the tie lengthwise to compress the wood fiber, and that such compression permitted the plates to creep toward the end of the tie, thus widening the gauge and increasing the pressure and abrading action on the spike. On account of thus lengthening the depression or indentation made in the tie by the lower flanges, it was, he says, practically impossible, when the plates had once moved, to return them to their original and proper position. He therefore, in such patent—the first in suit—provided a preferably truss-shaped, or, as distinguished from a flat or plain top surface, a "corrugated" or ridged plate on which to rest the rail between two upward-projecting flanges against which the rail abuts,

and blunt or square-ended, regularly stepped, lower flanges, supplementary to the spikes, which lower flanges are cut on a line diagonal with the rail, are preferably made with comparatively sharp lower edges, and extend downward directly below the grooves or valleys on the top of the plate sufficiently to become rather deeply imbedded in the tie. If preferred, the plate, instead of the flanges, may be cut diagonally to the rail. The distinguishing feature of his device is not a series of relatively narrow, flat-topped, supporting surfaces suitably spaced apart, i. e., a corrugated top surface for the plate, as distinguished from a flat or plain top surface; for, in alluding to the permissible variations in construction, none of which was to depart from the prime object of his invention, which is the stepped flanges or lower stepped projections, he states that the flanges may be divided; that instead of flanges stepped projections may be used; that a square, instead of a beveled, plate may be employed, and the under flanges alone be stepped; that but one end of the plate need be stepped; or that flanges having one or more of their ends stepped might be applied to a flat plate or to the numerous other constructions of plates then on the market. His top surface construction may be entirely omitted. Disregarding his thirteenth claim, which relates wholly to spike holes, each of his remaining 13 claims covers his lower flanges, and but 4 of them mention his upper flanges. The body of his plate may be changed, or may assume the form shown in some prior invention, but his stepped form of lower flanges or projections must be used, else his purpose to prolong the life of the tie cannot be attained. The language employed in his patent precludes the substitution for them of any alternative form. To locate his flanges parallel with the rail necessitates an abandonment of the "prime object" and "essential idea" of his invention,

which he declared to consist in providing a plate having on its under side a series of stepped flanges or projections arranged in a diagonal line with respect to the rail flange. The purpose of his peculiar form of construction is that the plate, after it has by lateral pressure been longitudinally displaced, may, for the purpose of prolonging the use of the tie, be taken up and the original gauge restored and the spikes relieved of undue pressue by so placing the plate on the tie that one of its flanges will, by pressure make a new indentation and each succeeding flange will fit into a previously formed depression, with its blunt end abutting against the previously compressed fiber, whose power to resist the outward thrust of the rail is enhanced by the depth of the indentations produced by his necessarily somewhat lengthened flanges. He contemplated two adjustments of the character mentioned, and, if stepped flanges be placed at both ends of the plate, additional readjustments to continue the life of the tie may be made by turning it end for end. If this last form of construction be adopted, it would seem there must necessarily be, to accomplish fully the inventor's purpose, an upward-projecting flange at each side of the plate, to receive the lateral thrust of the rail. It should be said, however, that there is no call in his eighth claim for such flanges. The prominence which he gives to the adjustable feature of his plate and the means of securing the same, as evinced by his later patent, No. 579,509, 1897, convinces us that the thought of a tie plate with other than somewhat lengthy, blunt-ended, stepped flanges or projections to engage the ties parallel with the fiber was not present when the first patent in question was issued, or when he obtained his patent No. 542,787, in 1895; and in his last two patents in suit the expressed preference for flanges of that character declared in 1894 still persisted.

The leading purpose of his second patent, which is

conceded to be an improvement upon, and a carrying forward of, the invention shown in the first patent in suit, is to locate his four preferably long, sharp, narrow, longitudinal, tie-engaging flanges directly or substantially beneath his four narrow, preferably flat-topped, rail-sustaining flanges, whose parallel sides are perpendicular to the intervening flat-bottomed top grooves or channels, that the weight may be sustained at points where the pressure on the plate is greatest and buckling thereby minimized. At each side of the top of the plate is a turned up portion to form abutting flanges to receive the thrust of the rail. The only element in his device whose omission was deemed unimportant is the punched out triangular teeth. His rail abutting flanges and lower ribs are substantially those shown in the patent to Reece, No. 494,692, 1893.

The dominant thought in the patentee's mind, as disclosed by his third patent in suit, was, aside from his purposed economy in the use of old rails, a T-shaped tie plate whose principal flange shall conform somewhat closely to the shape of the upper portion of the rail out of which it is to be made, and whose top surface configuration shall be such that water, sand, and other deleterious substances, such as brine dripping from cars, will drain off or away from the plate. He therefore provided downward-sloping grooves on the top of his plate, which may run parallel with, but are preferably transverse or diagonal, to the tie, and longitudinal tie-engaging flanges projecting from its lower surface, that the suction of the train, which, in passing, is transverse to the plate, may be utilized in clearing the plate of any material that may find lodgment on it. His main holding flange of unusual length, on which he lays stress, is central of the plate. It is therefore made much longer than those at the edge, whose office is to force the wood of the tie inward to a

firm and close contact with the central flange, to prevent the lifting of the outer edges of the plate, and to exclude moisture and sand from its under surface. He suggested no substitute for this particular shaped flange, which, as he understood, had in practice been abandoned. On the contrary, he intended to restore it to use and good repute. His other lower flanges are but auxiliary.

All of the flanges and grooves, both upper and lower, of the defendant's commercial tie plate run transversely of the tie. The lower ones are sunk into the tie by the pressure of the loads passing over them, and, by reason of the lateral thrust, compress the wood fiber outwardly throughout their entire length. As compared with the device shown in Wolhaupter's first patent, they are not stepped or given an arched effect to support the tie plate, and do not project immediately below the bottom of the valleys of the upper grooves, but are V-shaped, and extend from a flat under surface at points directly or substantially beneath, but not between, the upper rail-bearing flanges. The defendant's plate has an upward extending flange, like that of Wells, No. 203,570, 1878, and of Goldie, No. 485,030, 1892, against which the rail bears by reason of the lateral thrust. No such element is called for in any of the claims in question, excepting 3, 7, and 9. It has no long, narrow, sharpened flanges, nor a central flange of that character, because they are not necessary to insure efficiency. They extend, like those shown in Wolhaupter's second patent and that of Goldie, No. 485,030, Fig. 1, from directly or substantially beneath rail-bearing flanges, but not to afford means for sustaining the weight "at the points where there is the greatest pressure on the plates." The weight of the passing loads is sustained by the bottom of defendant's plate, and not by its lower flanges. Were it otherwise, in the absence of a central flange, its plates would probably break at the

middle. The use, in connection with defendant's device, of a central flange like that shown in Wolhaupter's third patent, or of one approximating it in length, is impracticable. The defendant depends wholly on flanges placed well toward the outer edges of its plate to hold it in position, excepting, of course, spikes, of which both avail themselves. The use of its plate by defendant has demonstrated that it does not require a central lower flange.

The field of tie plate invention had, at the time Wolhaupter entered it, been so assiduously cultivated as to offer many suggestions to and impose many limitations upon him. The great usefulness of tie plates to so important an industry as that of railroading has apparently induced great, if not excessive, liberality in awarding patents for even slight advances in the prior art. This appears by a comparison, for instance, of Goldie's patent No. 610,179, 1898, with Wolhaupter's patent of 1902, applications for both of which were pending at the same time. If the plaintiff's patents are valid, they are narrow, and entitled to but a limited range of equivalents, whether considered separately or as conjointly used. Invention in tie plates having been sought by so many minds, it is not wonderful that they were developed in many different and independent forms, all more or less original, and yet all having a somewhat general resemblance to each other. No one inventor preceding all the rest hit upon something which underlaid and included all that they produced, and thus acquired a monopoly and subjected them to tribute. The advance in the art was gradual, and proceeded step by step, so that no one acquired an exclusive monopoly, and therefore each patentee acquiring a valid patent became entitled only to his own specific form of device. Railway Co. v. Sayles, 97 U. S. 554, 556, 557, 24 L. Ed. 1053. The extent to which Wolhaupter was indebted to his predecessors in the

art will appear from the disclosures made by a few of the many patents in evidence. In all of his devices in question he sought to combine, with strength, lightness of weight and economy in production; but the same intent, sometimes affirmatively expressed, and sometimes not noted, because obvious, is manifested by others whose patents antedate his. The use of an upward-extending flange on one or both sides of tie plates to restrain the rail and receive its lateral thrust was so common prior to 1895 that a citation of earlier patents to show such element is unnecessary. The use of grooves or channels on the upper surface of his plate to serve as a receptacle for sand, grit, and other hurtful substances, and to facilitate their removal and the evaporation of moisture, had been expressly mentioned in the patents of Wells, No. 203,570, 1878, and Dockstader, No. 462,392, 1891, and are seen transversely of the rail in that of Wilson, No. 522,867, 1894. Dunham's device, patent No. 469,386, 1892, performs the same service, and, in addition, by reason of air spaces beneath the plate, facilitates the evaporation of moisture that may get between the plate and the tie. As the grooves in the Wells patent are parallel with the rail and in the line of the suction caused by the passing trains, they ought, it would seem, to be more effective in freeing the plate or chair of foreign substances than the grooves transverse to the rail shown in Wolhaupter's first and second patents. Dunham, among others, preceded Wolhaupter in the use of a "corrugated" or ridged plate of a truss nature, placed parallel with the tie, and alluded to the fact that a corrugated plate or chair in a groove or recess in the tie had been proposed, probably referring to the Ashcroft patent No. 388,240, 1888. His plate does not have sharpened lower flanges to enter the tie, or a flat-topped projection extending above the concave surfaces to receive the rail, but the lower contacting

portions of his plate must necessarily, to some extent, be depressed into the tie, and, if the top surface of the plate devised by Dunham (Fig. 4) and Wolhaupter, respectively, be made flat, which each of them says is permissible as regards his own device, their plates do not substantially differ, save in the degree of bluntness and the length of their lower flanges. The assistance in sustaining the weight put upon the plate and the exclusion of moisture from beneath it, attributed by Wolhaupter to the sloping or truss nature of the approaching sides of the lower flanges in his first patent, were also secured by the earlier devices of Churchward, No. 508,086, 1893, Worthington, No. 506,963, 1893, Holmes, Nos. 514,465 and 514,466, 1894, and Gabel, No. 530,175, 1894. Blunt or square-ended lower flanges engaging the tie lengthwise and necessarily compressing the wood fiber as the lateral pressure of the rail forces them toward the end of the tie were not original with Wolhaupter but are found in the two early patents of Servis, Nos. 249,407, 1881, and 294,816, 1884 of Holmes, Nos. 495,807, 1893, and 514,465, 1894, the patent of Worthington, and also of Reece, No. 494,692, 1893. Excepting that of Servis (No. 249,407, Figs. 3 and 4), all of the last-named patents show, as does Wolhaupter's, the lower edges of the flanges to be somewhat sharpened. The location of the lower tie-engaging flanges immediately or substantially beneath the shoulders or flanges sustaining the rail, which is the primary thought embodied in Wolhaupter's second patent in suit, is found in the patent of Goldie, No. 485,030, 1892, and, if there be but one upper rail-supporting flange or surface, as claims 1, 2, and 3 permit, in those of Worthington, and of Servis, No. 524,868, 1894. Sellers, by his patent No. 684,466, 1901, preceded Wolhaupter in the thought expressed in the third patent in suit, of manufacturing tie plates from old rails, and in the use of a long, central

holding, lower flange and a grooved top surface. Wolhaupter flanked his central holding lower flange with two shorter side flanges, but Wilson had previously done the same thing. Sellers' grooves, like those in the Wilson patent, run parallel with the tie; whereas those in the Wells run parallel with the rail, and those of Wolhaupter may be located either parallel with or transversely of it.

The production of either defendant's device or that of complainant in commercial use necessitates a complete reorganization of the Wolhaupter devices, whether they be considered separately or conjointly. It is clear that, if the patents and claims in question are valid, they must necessarily be so narrowly construed as to relieve the defendant from the charge of infringement. But we prefer to rest our conclusion on other grounds.

The plaintiff rightfully contends that claim 8 is so broad as to embrace any tie plate having on its under side more or less sharpened tie-penetrating and engaging devices and on its upper side a series of flanges on which the rail may rest. No limitation by the drawings or the specific form of description can be imported into it without making it identical with some one or more of the other claims. It was intended and granted as a monopoly upon the broad generic idea of which the form shown in the drawings and description was a species. Wolhaupter endeavored to cover a field of invention far wider than he was entitled to occupy, and the claim must be held void, because it is broader than the real invention. Edison v. American Mutoscope Co., 114 Fed. 926, 934, 52 C. C. A. 546 (C. C. A. 2); National Enameling & Stamping Co. v. New England Enameling Co., 151 Fed. 19, 23, 80 C. C. A. 485 (C. C. A. 2). By like reasoning, each and every of the other claims involved must also be held invalid.

In view of the prior state of the art, which, will not be further considered except to illustrate our views, no de-

vice constructed according to any of the claims in question involves invention. Wells' patent calls for two projecting lateral flanges to restrain and receive the thrust of the rail and three rail-sustaining bearings or top flanges located in the same horizontal plane. On each side of the central flange is a groove to lighten the structure without impairing its strength, and to care for sand and grit. Directly below the central rib or flange is a square-bottomed rib to prevent longitudinal and lateral displacement. He does not provide for spike holes; neither does claim 8 call for them. His patent does not suggest that his lower rib may be more or less sharpened; but so old a patent as that of Hudson, No. 142,020, 1873, taught that a V-shaped or other suitably shaped flange might be used instead of a square-bottomed one, and those of Gould, No. 280,030, 1883, Goldie, No. 485,030, Worthington and Holmes, No. 495,807, that the use of two or more sharpened lower flanges was a well-known expedient. Plaintiff's commercial plates show a reduction to two or more, as convenience suggests, of the multiplicity of top grooves disclosed in the Wolhaupter patents, and their top surfaces are thus assimilated to that of Wells. In such commercial plates the plaintiff also reduces to two the multiplicity of lower flanges shown in Wolhaupter's patent in question, and places them transversely of, instead of parallel with, the tie. Neither the plaintiff nor Wolhaupter deemed such reduction as to grooves or flanges or the change in the course or form of both from a position parallel to the fiber to one transverse of the same to be without the terms of the patent. If a reduction in the number of flanges and a change in their form does not involve invention (and we think it does not), and is but an authorized application of the rule of equivalents, then to increase the number of flanges (in the Wells' patent, for instance) and modify the form must also fall within

the same rule; but this makes the Wells' patent anticipatory not only of the first, but of all three, of Wolhaupter's devices, as claimed in this case. The fact that Wells' device spans two or more ties and is a railway chair does not preclude consideration of it as anticipatory. Sectioned or reduced in length so as to span a single tie, as does that of Goldie, it assumes the form of a tie plate. Railway chairs are a species of railway plates or track fastenings, and possess the essentials of a tie plate, in that they maintain the alignment of the rails and the gauge of the track, and are so closely allied to tie plates that both inventors and the patent office have applied the name of the one to the other, as appears from the patent of Goldie, No. 426,530, 1890, and Parsons, No. 465,492, 1891.

Reece and Holmes in their respective patents, Nos. 494,692 and 495,807, 1893, each wished to provide a series of stops, or abutments, or flanges on the upper surface of their respective devices to receive the outward bearing of the foot flange of the rail. Wolhaupter carried this same idea into his second patent. Wells had employed a lower flange extending from a flat under surface and directly beneath an upper rail-bearing flange located between grooves or valleys. A series of rail-bearing flanges extending above the adjoining top surface grooves or depressions are found in Wolhaupter's first patent in suit. Such a modification of any one of the devices shown in the last four named patents as would make it conform to the device claimed in the second patent in suit would not involve the exercise of the creative faculty.

The Hart patent, No. 696,964, 1902, provides for lower flanges parallel with the fiber of the tie for grooves on the upper surface reaching from the middle of the plate to its outer edges, parallel with the rail. This is one of the forms permitted by the third Wolhaupter patent. The

only difference between the two is that Hart's patent shows four lower flanges, instead of three; his outer flanges being longer than those centrally located. Figures 10 and 11 in Wolhaupter's patent No. 691,037, 1902, both show a series of upper surface grooves. Figure 11 further shows that one long central lower flange is deemed by him a modification of the two lower flanges shown in figure 5. There can be no originality, in view of the prior art, in the use by Wolhaupter of a multiplicity of lower flanges, as compared with the patent of Sellers, nor an avoidance of the rule of equivalents by his use of three flanges instead of the four found in the Hart patent. In view of the Goldie patent, No. 610,179, 1898, which has two lateral lower flanges (Fig. 1) (but may have a third at the center of the plate) and a top surface groove, all of which grooves and flanges run parallel with the tie, the recognition by plaintiff and Wolhaupter that a variation in the direction given the grooves and flanges and in the number of each falls legitimately within the rule of equivalents, places the patents of both Goldie, and Sellers, and especially that of Sellers, in the anticipatory class, and robs of patentability Wolhaupter's third device as herein claimed. The use of the long lower central flange, as we have heretofore seen, was anticipated by both Sellers and Wilson.

Other questions discussed need not be considered. In view of the conclusion reached, the trial court must be affirmed, and it is so ordered.

EXHIBIT D.

IN THE

UNITED STATES CIRCUIT COURT OF APPEALS

For the Seventh Circuit.

No. 1886. OCTOBER TERM AND SESSION, 1914.

RAILROAD SUPPLY COMPANY, *Appellant,*
vs.
HART STEEL COMPANY and GUILFORD S. WOOD, *Appellees.*

Appeal from the District Court of the United States for the Northern District of Illinois, Eastern Division.

Before BAKER and SEAMAN, *Circuit Judges,* and GEIGER, *District Judge.*

BAKER, *Circuit Judge,* delivered the opinion of the court:

Appellant failed in its suit to hold appellees as infringers of claim 8 of patent no. 538,809, May 7, 1895, and claims 1, 2 and 3 of patent no. 691,322, January 14, 1902, and claims 7 and 9 of patent no. 721,644, February 24, 1903, all granted to B. Wolhaupter, appellant's assignor. A report of the decision in the trial court is found in 193 Fed. 418. On a record identical with that now before us the Court of Appeals of the Sixth Circuit in *Railroad Supply Company* v. *Elyria Iron & Steel Company,* 213 Fed. 789, adjudged that the claims in suit were void for lack of invention. While these decisions are entitled to, and have been given, great weight in our consideration of the case, neither of them can be allowed to control our judgment or relieve us in any degree from giving the record a complete and independent investi-

gation. We proceed to set forth the findings of fact and conclusions of law which lead us to hold that the claims are valid and infringed.

I. The inventions covered by the several claims in suit are susceptible of joint use in one article, a railroad tie plate, and therefore the three patents are properly brought forward in one suit. Of the three, we deem the first the most important, the others being improvements of the tie plate covered by claim 8 of the first patent. That claim reads as follows:

> "8. A railway tie plate formed on the under side with devices more or less sharpened adapted to penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests, substantially as described."

1. At the root of the case lies the inquiry whether it is true that "Wolhaupter endeavored to cover a field of invention far wider than he was entitled to occupy, and the claim must be held void because it is broader than the real invention." This conclusion is based on the finding that "the distinguishing feature of his device is not a series of relatively narrow, flat-topped, supporting surfaces suitably spaced apart, *i. e.*, a corrugated top surface for the plate as distinguished from a flat or plain top surface; for, in alluding to the permissible variations in construction, none of which was to depart from the prime object of his invention, which is the stepped flanges or lower stepped projections, he states that the flanges may be divided; that instead of flanges stepped projections may be used; that a square, instead of a beveled, plate may be employed, and the under flanges alone be stepped; that but one end of the plate need be stepped; or that flanges having one or more of their ends stepped might be applied to a flat plate or to the numerous other constructions of plates then on the market. His top surface construction may be entirely

omitted. Disregarding his thirteenth claim, which relates wholly to spike holes, each of his remaining 13 claims covers his lower flanges, and but 4 of them mention his upper flanges. The body of his plate may be changed, or may assume the form shown in some prior invention, but his stepped form of lower flanges or projections must be used, else his purpose to prolong the life of the tie cannot be attained. The language employed in his patent precludes the substitution for them of any alternative form. To locate his flanges parallel with the rail necessitates an abandonment of the 'prime object' and 'essential idea' of his invention, which he declared to consist in providing a plate having on its under side a series of stepped flanges or projections arranged in a diagonal line with respect to the rail flange."

A reading of the specification discloses very clearly, we believe, that instead of the patent merely describing one invention in which the prime object or essential idea consisted in providing on the under side of the tie plate a series of stepped flanges or projections arranged in a diagonal line with respect to the rail flange, another invention was described, as distinct and separate an invention as if it had been contained in a separate patent, and it is in relation to this additional disclosure that claim 8 and some other claims of the patent were framed. We subjoin Fig. 1 and Fig. 2 of the patent and under headings A and B those parts of the description and also the statements of invention which point to the separateness of the two subject-matters.

Fig. 1.

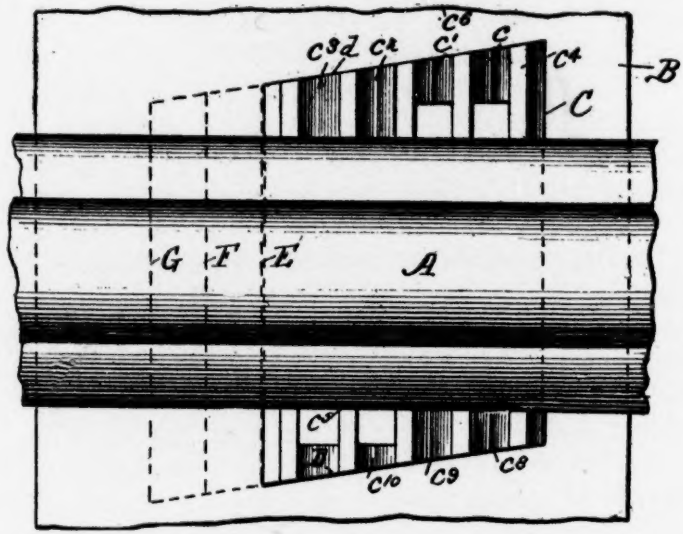
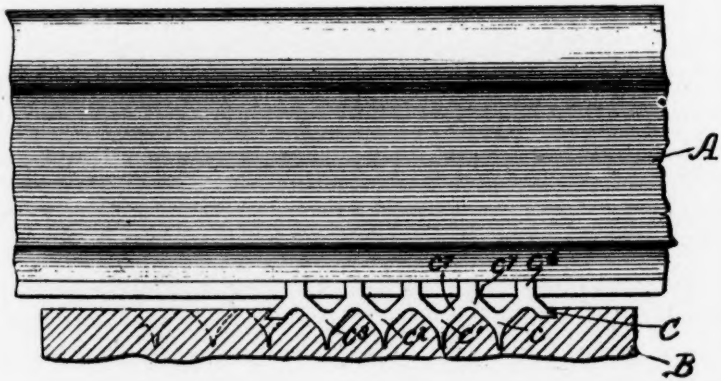


Fig. 2.



A. "In carrying out the invention A represents the track rail, B the tie, and C the tie plate. The plate is preferably, although not necessarily, formed into the shape shown more particularly in Fig. 2, that is to say, what may be termed a trussed shape so that flanges are provided on both the under side as at c, c^1, c^2, c^3 and top side as at c^4. On the top side a way c^5 for the rail or

what may be termed the rail seat is provided. The flanges on the under side are preferably shaped with comparatively sharp edges c^6 so that they will readily enter and separate the grain of the tie. As will be seen when in position these under flanges extend parallel with the grain of the tie, the ends being substantially blunt or square and forming abutments to prevent so far as possible the plate from creeping along the tie. It will be observed that by this form of plate there is much less opportunity or chance of buckling than with the ordinary flat plate, since each point where the rail rests upon the plate is supported and trussed by metal which is more or less on edge instead of on its side, thereby forming for each resting point of the rail two girders c^7 joined at the apex by the top flanges c^4 where the rail rests. By the above construction also the wood between the flanges c, c^1, c^2, c^3 will, because of the sloping of the approaching sides of the flanges, be compressed between the flanges, thereby greatly aiding in sustaining the weight put upon the plate, and also in excluding moisture from the wood under the plate. A form of plate such as I have just described is also of material advantage in that I am enabled to make it much lighter in weight. In this construction of plate with the same amount of material as is ordinarily used in tie plates a much stronger plate is obtained. Heretofore it has been a commercial necessity in order to get the price of plates where they could be sold for use on the cheaper grade of ties, to reduce and diminish as far as possible the material and consequently the weight of the plate. The result has been that with the plate flat and thin it has buckled when the rail pressure has been brought on it thereby damaging the tie as well as rendering the plate useless as a bearing for the rail; but in my construction since the points where the rail rests are supported by metal more or less in upright

position the plate is greatly strengthened without addition of weight. So also, by a construction as above, the top of the plate where the rail is seated comprises a series of flat portions with a series of depressions between, so that while there is abundant wearing surface between the rail and plate, there is space for sand, cinders, etc., to work out. Again, these depressions permit the draining off of water and moisture so that in cold weather the top of the plate, particularly the space between the rail and plate, is not covered with ice and the friction between the rail and plate thereby either lessened or obviated entirely."

And it was with respect to the above quoted particularized description that the patentee made the following general statement of invention:

A. "The invention further contemplates a form of plate provided with top and under flanges which shall be extremely strong in its construction and effective in its designed use, and yet easily rolled or formed into shape as well as very light weight." And upon this general statement of invention and particularized description the patentee based not only claim 8, which by its terms is not limited to the preferred trussed shape shown in Fig. 2, but also other claims in which the trussed form and other details of construction are covered. Of these latter claims we quote 10 and 11 as illustrative:

> "10. A railway tie plate the body of which is formed into a series of arches the lower edges of said arches being provided with tie-entering and engaging devices or flanges, substantially as described.
>
> "11. A railway tie plate the body of which is formed into a series of arches the lower edges of which are provided with tie-entering and engaging flanges, and the upper side of the plate having a series of depressions vertically above said engaging flanges, substantially as described."

B. "I will now describe the second feature of the invention, viz., the ability to adjust the plate to take up any widening of the gage due to the lateral movement of the plate and rail. The ends of the engaging flanges on the under side of the plate are regularly stepped or cut on a diagonal line as compared with the rail flange. It is of course obvious that the ends of the flanges might be cut on this diagonal line or the entire end of the plate cut in this way. In my present drawings I have shown the latter construction, the entire end of the plate being sheared diagonally as at D." (Then follows a particular description of the stepped flanges on the under side of the plate, which for present purposes can be sufficiently understood from an examination of Fig. 1, after which the specification proceeds.)

"It is obvious that the construction just described is susceptible of many changes, and the prime object of the invention still be attained. For instance, the under flanges might be divided, or instead of flanges they might be merely projections and the plate instead of having its end beveled might be square, and the under flanges alone be stepped; or but a single end of the plate need be stepped; or the flanges having one or more of their ends stepped might be applied to a flat plate or to the numerous other constructions of plates now on the market. In all of the above named variations the principle employed is the same and each would embody the essential idea of my invention which consists in providing a plate on its under side with a series of stepped flanges or projections, that is to say, flanges or projections arranged on a diagonal line with respect to the rail flange."

With respect to the subject-matter of stepped flanges on the under side of the plate the inventor made the following general statement of invention:

B. "My invention has for its object the production of

a plate which, while being provided with the top flange to receive the thrust of the rail, is so constructed on its under side that, after it has been moved by the lateral pressure of the rail, it, together with the rail, can be easily moved back to the proper position to maintain the gage, and be held in that position even more firmly than when originally laid."

And upon this general statement of invention and particularized description the patentee made several claims to features of the stepped flanges on the under side of the plate. We quote claim 1 as an example.

> "1. The combination with the rail and tie of the tie plate provided with a series of stepped tie engaging flanges or projections on the under side, each arranged to fit into the perforation made by the flange or projection next adjacent, whereby when the plate is shifted transversely of the tie it is also shifted longitudinally thereof, substantially as described."

It is thus made clear, we believe, that a serious error is committed in saying that the stepped flanges on the under side of the plate is the prime object and essential idea of the patent. Undoubtedly such a construction is the prime object and essential idea of one of the two separate inventive concepts disclosed and claimed in the patent. Both inventive concepts contemplate the production of a complete tie plate and both concepts are embodied in combination claims; but it is only with respect to the concept of stepped flanges on the under side of the plate that the patentee makes the statement that many changes of construction might be made without departing from the prime object of the invention, as, for instance, applying the stepped flanges to a plate having a flat top.

Turning now to claim 8 we perceive that the subject-matter is a railway tie plate formed on the under side

with devices more or less sharpened adapted to penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests. Advantages in having a series of flanges on the upper side of the plate for the rail to rest upon are clearly pointed out in the part of the specification which we have quoted under the heading A. These advantages are manifestly independent of the character of the tie-engaging flanges on the under side of the plate. Claim 8 very clearly, we think, undertakes to stake out a monopoly of having rail-supporting flanges on the upper side of any railway tie plate on the under surface of which are devices of any sort adapted to penetrate and engage the tie. The objects to be attained by the rail-supporting flanges were separate and distinct from those to be accomplished by the stepped arrangement of the tie-engaging flanges. The mental concepts were different and their coming into being was in nowise dependent upon each other. Therefore it is inadmissible, in our judgment, to read into claim 8 that part of the specification which is devoted to the stepped arrangement of the tie-engaging flanges and thus limit the right of the inventor to hold a monopoly of the rail-supporting flanges in a railway tie plate unless that tie plate also embodies the independent concept of the stepped arrangement of the tie-engaging flanges.

And inasmuch as it was confessedly old in the art to have on tie plates tie-engaging devices that ran parallel with the grain of the tie and also across the grain, there is nothing in the prior art or in the patent itself that requires the tie-engaging devices of claim 8 to be parallel with the grain of the tie or across the grain, and assuredly nothing that requires them to be the stepped tie-engaging flanges of claim 1.

Nor is the tie plate of claim 8 to be limited to a con-

struction in which the depressions between the rail-supporting flanges are vertically above the tie-engaging flanges, nor to a construction wherein the body of the plate is formed into a series of arches. This is so because the alignment of the depressions on the upper side with the flanges on the under side is covered by claim 11, and the formation of the body of the plate into a series of arches is covered by claim 10; and because in contemplation of law each claim of the patent must be considered as setting forth a complete and independent invention. *Leeds & Catlin* v. *Victor Talking Machine Co.*, 213 U. S. 301; *Celluloid Mfg. Co.* v. *Zylonite Brush & Comb Co.*, 27 Fed. 291; *Chicago Woodenware Co.* v. *Miller Lander Co.*, 133 Fed. 541; *XXth Century Heating & Ventilating Co.* v. *Taplin, Rice-Clerkin Co.*, 181 Fed. 96. To construe claim 8 as being the same as either claim 10 or claim 11 would be to declare claim 8 void as a duplication. Such a course should not be pursued unless it cannot fairly be avoided. In the present instance not only can it fairly be avoided, but further the specification clearly requires a differentiation of claim 8 from the other claims of the patent. In quotation A the patentee shows that the form portrayed in Fig. 2 and particularly described by reference letters was only the preferred form, preferred because, while embodying the general characteristics and the law of the structure covered by claim 8 with respect to rail-supporting flanges on the upper side of a plate having on its under side any sort of tie-engaging devices, it also enabled the maker to embody at the same time the stepped arrangement of the lower flanges described and claimed in other parts of the patent.

We therefore conclude that the Patent Office was right in determining that there was a sufficient description and disclosure of invention to support claim 8 as pre-

sented; and further, that claim 8 should be given its prima facie value unless matters outside the patent make such a construction impossible.

2. A contention is made that the association of elements in claim 8 does not constitute a true mechanical combination, but is merely an aggregation. In *Pickering* v. *McCullough*, 104 U. S. 310 (318), the one statement of Mr. Justice Matth[illegible]at "in a patentable combination of old element[illegible]he constituents must so enter into it as that each qualifies every other," if separated from the context and taken to mean that the natural action of each element must by the action of the other elements upon it be converted into some sort of action other than its natural action, seems to have gone too far. The Patent Office has continued to grant and the patent courts have continued to sustain combination claims on the theory that it is sufficient if the elements are associated in a unitary structure and there co-operate to produce either a new mode of operation or a new result or the old result in a modified and improved way. In *Oshkosh Grass Matting Co.* v. *Waite Grass Carpet Co.*, 207 Fed. 937, we upheld, against the defense of aggregation, in a machine for making grass twine, claims for combinations of "means for forcing the material forwardly, a funnel into which the material is received, compression-rolls adapted to receive the material therebetween after said material leaves the funnel, and means, after the material is compressed, for wrapping a twine therearound," although it is apparent that the natural action of the feeding means could not be changed into some other sort of action by the subsequent action of the compression-rolls or by the still later action of the twine mechanism. In short, the action of no one of the elements could or did in anywise affect the inherent law of action of any of the other elements.

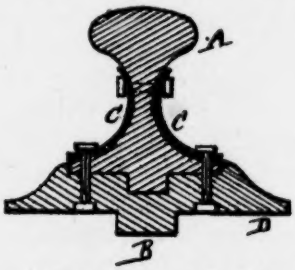
But, because the grass twine machine was a unitary structure and because all of the elements co-operated to produce an improved grass twine, the defense of aggregation was overruled. And in *Krell Auto Grand Piano Co.* v. *Story & Clark Co.*, 207 Fed. 946, citing *Burdett-Rowntree Mfg. Co.* v. *Standard Plunger Elevator Co.* 196 Fed. 43, 197 Fed. 743, and other cases, we upheld, against the defense of aggregation, in an automatic player-piano, claims for the combination of the controlling levers with the fall-board, although no co-action between those elements was possible except through the mediation of the operator. In the instant case there is a unitary structure in which all of the elements of claim 8 co-operate to produce a new tie plate with new and improved qualities. We are therefore of the opinion that, if claim 8 is to be overthrown, it must be on account of some other defense.

3. The utility of the invention is abundantly demonstrated by the instant and growing demand, amounting at the beginning of this suit to over forty million plates a year, and is further shown by appellee's move to share in this commercial success in the face of the certainty of vigorous and expensive litigation. This last mentioned fact might also be taken as sufficient to evince the novelty of appellant's structure, since appellees probably would not venture on the possibility of being convicted of trespass if they could have found upon the public commons what would serve their commercial purposes. And an examination of the seventy-odd patents in the record leaves no doubt that appellant produced something that in fact was new. The real question at this point in the case is whether the inventive faculty or no more than the skill of the mechanic was employed in producing the new thing, for, as declared in *Bates* v. *Coe*, 98 U. S. 48, anticipation or denial of novelty of a combination claim

cannot be based upon picking and choosing pieces here and there from prior patents and publications and thus showing that each of the elements was old. The real test is whether the mental concepts that are distinctly disclosed in and by the laws of the prior non-anticipatory patents and publications left no room for a new and independent mental conception in bringing into working form the new machine or product or process under investigation.

An analysis of all the prior patents we deem unnecessary. If the strongest references cannot prevail, it would be profitless to review the others. Two classes of references will be noticed, rail chairs and tie plates.

a. Patent no. 142,020, August 19, 1873, to Hudson, and patent no. 203,570, May 14, 1878, to Wells, are the strongest references of the rail chair class. Fig. 2 of



The projection from the under side of the rail chair is not a device "more or less sharpened adapted to penetrate and engage the tie"; it is a heavy rectangular rib made to fit snugly into a corresponding depression cut into the tie in advance. And the upper side of this Hudson chair is not provided with "a series of flanges on which the rail rests," for the depression in the upper surface of the chair so corresponds with the snugly fitting rib depending from the rail that the rail throughout its breadth is seated in uniform contact with the chair. The Hudson patent, in our judgment, furnished no light to

those concerned with the problem of producing an efficient tie plate. As wooden ties became more and more expensive and as rails and trains and traffic became heavier and heavier, the cutting of the ties by the action of the rail flange due to the wave motion of the track became a very serious matter. The shingles or flat plates of wood with which the practical tie plate art began were soon found to be insufficient. These were succeeded by flat plates of iron, and down to Wolhaupter's time the best that the practical art had was an iron tie plate having a flat upper surface and having tie engaging projections on the under side. Physical exhibits in this case show that these flat plates became warped or worn through in a comparatively short time. The wearing relation between the rail and tie plate is the same as between the rail and the tie; but with rail chairs the situation is different. Rail chairs are devices used where the ends of rails come together; they are intended to hold the separate rails firmly together and in alignment and so give them as far as possible the effect of being one continuous rail; they are bolted or otherwise permanently and securely affixed to the rail; and so, as far as cutting or grinding action between the rail and the tie caused by the wave motion of the track is concerned, they belong with the rail. Tie plates are intended to protect the wooden ties from being worn and cut by the action of the flange of the T-rail due to the wave motion of the track; they are laid upon the surface of the ties and are attached thereto by means of tie-engaging projections; spike holes are provided in the plates through which are driven the spikes whose heads clamp over the flange of the T-rail; and so, as far as cutting or grinding action between the rail and the tie caused by the wave motion of the track is concerned, they belong with the tie. And thus, due to the wave motion of the track, water and sand or grit would get in between the rail and the surface of the flat tie plate and would grind and destroy the metal. This was a known condition of the practical tie-plate art; but the record does not show

that this same condition had to be met by workers in the rail chair art, and the law of the rail chair structure would seem to exclude it; and it was not until after Wolhaupter's disclosure that any mechanic, expert or otherwise, claims to have discovered in the 22 year older Hudson patent any instruction regarding the way in which to build an efficient tie plate.

Figs. 1 and 3 of the Wells patent are as follows:

Fig. 1.

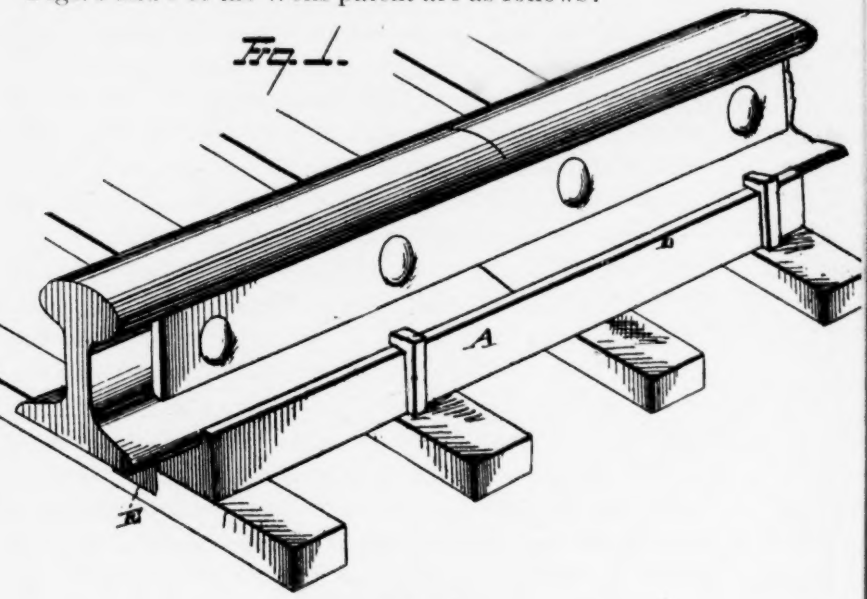
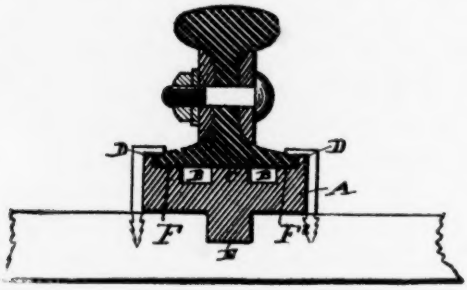


Fig. 3.



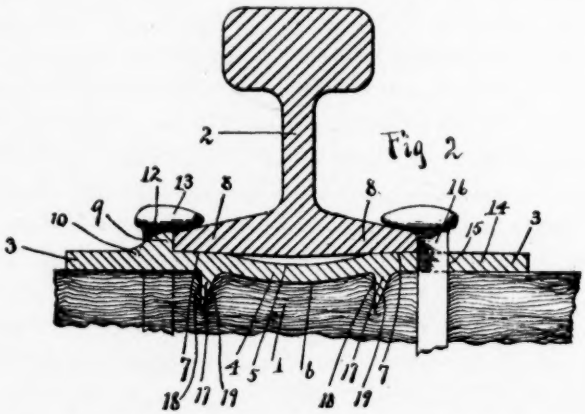
This chair, as Wells directed it to be made, extends over four ties. The depending rib E is not a device "more or less sharpened adapted to penetrate and engage the ties"; it is a rectangular projection, about one-half as broad as the head of the rail, and made to fit snugly into a prepared channel cut across the body of the tie; the channel in the tie is of such a depth as manifestly to weaken it; the purpose of the depending rib is to prevent lateral displacement of the chair and to impart increased strength and stiffness to the central portion of the chair; this strengthening function is called into play where the depending rib acts as a girder from tie to tie; and it is therefore a clear departure from the law of the structure to cut from Wells' chair a piece the width of a tie and then call the rib or girder E a device in a tie plate adapted to penetrate and engage the tie. The rail is supported upon the ledges F, F^1 and C. These ledges result from the presence of the grooves B which, as the patentee says, enable the chair to be made much lighter than the ordinary chair and which also serve as receptacles for sand and grit which may enter between the chair and the rail. But inasmuch as Wells's device was a rail chair extending over four ties, a distance of about 5 feet, it seems fairly clear to us that Wells never had in mind, and the record does not show that the railway chair art was ever concerned with, overcoming the emery-like grinding and cutting action upon the tie or upon armor on the tie as that action is brought into play upon the ties successively by the wave motion of the track. For, though Wells's chair may not be as securely and inevitably made a part of the rail as is the case with Hudson's chair, yet it is clear that Wells intended the law of his structure to be that the chair should be part of the rail, just as a tie plate is a part of the tie. The sides D extend up flush with the upper surface of the flange of the rail; the spikes shown

in Fig. 1 and described in the specification are not the ordinary rail spikes, but are specially made of such a width as to lock the rail into the chair; and, though this locking might not be as efficient as the permanent bolts in the Hudson chair which was of no greater length than the width of the tie, yet by reason of the great length of the chair as specified by Wells, probably the locking was in fact just as effectual and there is no doubt that Wells intended the rail to be locked securely in the chair. If this is so, then the upper surface of the tie plate of claim 8 was distinctly novel in itself. But this is not vital to the validity of the claim. The claim is for a combination and it is very evident that the devices of both Hudson and Wells would have to be redesigned, reorganized and rebuilt in order to bring into existence the combination of claim 8. That something more than the skill of a mechanic who was acting in the line of the teaching of these patents was required to produce the efficient tie plate of claim 8 might be inferred from the great lapse of time between Hudson and Wells and the disclosure of Wolhaupter, during which time the need of an efficient tie plate was recognized by many skillful persons engaged in improving the roadbeds of railroads; but the fact is really demonstrated by the practical development of the tie plate art.

b. Prior to 1870 the tie protector was a wooden single or plate. From about 1870 to 1880 a simple metal plate with flat top and flat bottom was used. Between 1880 and 1895, when Wolhaupter made his disclosure, a channel plate of equal thickness throughout which fitted over the tie like a cap, a flat topped plate with tie-engaging devices on the bottom, a plate flat on the top and bottom with a shoulder on the top to resist lateral pressure of the rail, and the same sort of a plate with tie-engaging devices on the bottom, were in actual use; but never prior

to Wolhaupter had the tie plate of claim 8 been produced. And since then the entire development has been along the line of improving the tie plate of claim 8. If the redesigning and reorganization of the rail chairs of Hudson and Wells was so obvious, why did not some one of the many men who were interested in the improvement of the roadbeds of the one hundred and thirty railroads of our country bring forward this combination which has proven to be so desirable?

In addition to the prior practical art some prior patents need to be noted. Fig. 2 of the Goldie patent No. 485,030, October 25, 1892, is as follows:



The draftsman has indicated a space between the bottom of the rail flange and the top of the central portion of the tie plate; but this is contrary to the intention that Goldie had in mind. He points out that the under surface of the rail flange is slightly raised in the middle and that the depression in the tie plate is made to accommodate the bottom of the rail so formed, and in this way a firm and solid bearing for the rail is afforded throughout the width of the rail flange. Physical exhibits showing the result of the actual use of this tie plate demonstrate that

Goldie's idea accorded with the fact, and that the rail actually bears fully upon the tie plate throughout the width of the rail flange. The manufacture of this plate, as the patentee thereof himself testified, was abandoned, and its use was entirely superseded by the Wolhaupter plate.

Patent No. 494,692, April 4, 1893, to Reece, is for a method of making railroad tie plates. At one step in the process of manufacture there are flanges at each edge which might be rail supports if they were left in the completed plate. But the next step in the manufacture cuts away these flanges at the part where the rail is seated, and the rail rests upon the flat surface of a plate of uniform thickness, except that there are two holes left in the plate by the process of cutting away the flanges. It is difficult to see how Reece, by cutting away what otherwise might be rail-supporting flanges, was instructing the ordinary mechanic how to make a tie plate having on its upper side a series of flanges on which the rail rests, much less instructing him in regard to the desirability of such flanges.

Wilson's tie plate, described in patent No. 522,867, July 10, 1894, is made in several pieces. One part of Wilson's tie plate, by reorganizing it in the light of Wolhaupter's disclosure, might be made into something similar; but when the whole plate is put together as Wilson instructed it to be, the rail rests upon a flat plate of uniform thickness throughout.

So far there has been found in neither the practical nor the paper prior art any tie plate which approached the idea of having rail-supporting projections upon the upper surface of a plate. Figs. 1 and 4 of the Dunham patent No. 469,386, are as follows:

FIG. 1.

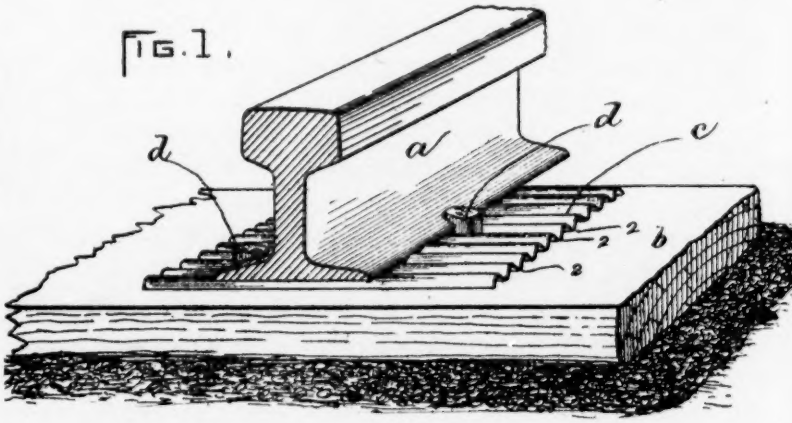


FIG. 4

This corrugated plate is of uniform thickness throughout. Two purposes were to be served by the corrugations. First, the patentee says that a corrugated plate three-sixteenths of an inch thick will be stiffer and better adapted to resist the bending or buckling strain to which it is subjected by the weight of the rolling stock than a flat plate which is five-eighths of an inch thick. This tie plate never made any appearance in the practical art. Testimony of practical men convinces us that Dunham's three-sixteenths of an inch material would either break or flatten out under the weight to which it would have been subjected in actual use at the date of the application, and since that time the strains have greatly increased. Second, the corrugations were to afford air spaces between the bottom of the plate and the tie to obviate the decay of the wood. Regarding the bottom formation of this tie plate of uniform thickness, it is to be noted that the corrugations could not be tie-penetrating and tie-

engaging devices, else the air spaces would be lacking and the plate would fit tightly upon the wood as in Wolhaupter's plate. Regarding the upper surface, no suggestion with respect to the corrugation is made except that thus the plate may be made lighter and stronger. And that the character of the upper surface was not material is shown by the patentee's statement in connection with Fig. 4 that a plate with a flat upper surface corresponds fully to his invention. In our judgment nothing in this paper patent corresponds in letter or in spirit to the tie plate of claim 8.

4. The law which we believe is applicable to these facts has been frequently declared and may be briefly summarized. Invention of a combination does not lie in gathering up the elements that are employed, but consists in first conceiving that a new and desirable result may be attained by bringing about a relationship of elements which no one has before perceived and then going forth to find the things that may be utilized in the new required relationship. In an old and well developed field the apparent simplicity of a new device is often the highest evidence of inventive genius. So far as human minds are able, judges should exclude from view the disclosure of the patentee, should regard the patentee's problem as of a time antedating the application, and should therefore not too readily accept the *ex post facto* wisdom of the bystander. Prior art structures are to be examined in view of the purposes and laws of such structures. It is not enough that a prior art device approach very near the idea of the patent in suit; it must so clearly disclose the idea that it would be apparent to a mechanic of ordinary intelligence who was not examining the device for the purpose of discovering in it the idea of the patent; for, if he already had that idea, he would not be getting it from the prior art device, but from his own imagination

or some other source. *Clough* v. *Barker*, 106 U. S. 155; *Topliff* v. *Topliff*, 145 U. S. 156; *Potts* v. *Creager*, 155 U. S. 597; *Diamond Rubber Co.* v. *Consolidated Tire Co.*, 220 U. S. 428; *Ryan* v. *Goodwin*, 3 Sumner 514; *Regent Mfg. Co.* v. *Penn. Elec. Co.*, 121 Fed. 80; *Faries Mfg. Co.* v. *Brown & Co.*, 121 Fed. 547; *Ideal Stopper Co.* v. *Crown Cork & Seal Co.*, 131 Fed. 244; *Wm. B. Scaife & Sons Co.* v. *Falls City Woollen Mills*, 209 Fed. 210.

Another consideration is the presumptive validity of a patent. From long and continued repetition of the phrase the members of the patent bar and of the patent bench sometimes may seem to get into the condition of the man who repeats a word over and over until it fails to convey any meaning to his mind. But this presumption should be given more than formal recognition. A patent is a contract between the government on behalf of the people and the patentee. The grant of a patent might have been made conclusive evidence of its validity except against suits by the government for fraud or mutual mistake in the issuance. But the fact that certain defenses are left open to the individual should not make us lose sight of the nature of the presumption that attaches to the grant. Not merely has the application been examined on behalf of all the people by experts who have access to all the prior patents and publications of the world; not only has the applicant spent his time and invested his money in procuring the patent; but in most of the important cases the patentee and those working under him have invested very large sums in buildings and machinery and have expended other large sums and put in great energy and effort to build up, by advertising and salesmanship, a profitable business. And this is done before anyone challenges the presumptive validity of the patent. Courts therefore should not view the application as of the date of its filing and constitute themselves into a board of re-

iewing examiners and on nicely balanced considerations nd that the Patent Office examiners were in error; but ney should consider the patentee's equities in his business 'hich has developed under the presumptive validity of he patent, should give heed to the place achieved by the atented article in the field of the practical art since the ate of the patent, and should therefore decline to sus- ain the defense of non-invention and to strike down the atent and the business built upon it unless that defense as been established beyond a reasonable doubt. In his case we find that the appellees have not so maintained heir defense.

II. Claims 1, 2 and 3 of the second patent read as ollows:

> "1. A railway-tie plate provided on its upper side with one or more flanges on which the rail may rest or by which it is directly sustained and on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, substantially as described.
>
> "2. A railway-tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained and on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter and sharpened to permit them to readily enter the tie, substantially as described.
>
> "3. A railway-tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained, on the under- side with one or more sharpened tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, and on the upper side with an additional flange or flanges extending above the plane of the rail-sustaining flanges and adapted to receive the lateral thrust of the rail, substantially as described."

In the prior art the nearest r erence is the first Wol- aupter patent, which shows a ie plate having rail-sup- porting and tie-engaging flanges. The claims now in

question are for a specific and limited improvement of the first Wolhaupter tie plate. By limiting the construction to one wherein the tie-engaging flanges are parallel with and directly beneath the rail-supporting flanges greater strength was obtained. Nothing in the prior art anticipates this particular construction. Of course the idea may be the same as that which induces the placing of the columns on one floor of a building immediately beneath the columns on the upper floor. But the question here, as was the case with the first patent, is one of invention, whether it involved more than mechanical skill to perceive that such a general strengthening principle might be brought into the relationship between the elements of a tie plate, and then practically to organize the new structure. The prompt acceptance of this idea, the commercial success to which this idea has contributed, and the fact that seven years elapsed after Wolhaupter had disclosed the general combination before any of the numerous engineers interested in railroad construction perceived the possibilities of such a relationship, lead us to resolve any doubt that might be created by the apparent simplicity of the step, in favor of the validity of the patent.

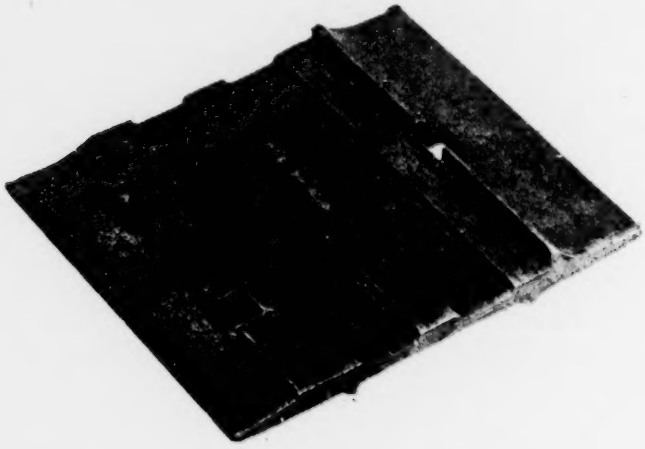
III. Claims 7 and 9 of the third patent are in these words:

> "7. A tie-plate provided in its rail-supporting surface with transverse grooves or channels, and at one margin of said supporting-surface with a transverse rail-abutting shoulder."
>
> "9. A tie-plate provided in its rail-supporting surface with transverse grooves or channels, reaching to the edge of the plate, and at one margin of said surface a transverse rail-abutting shoulder."

Here again is a specific and limited improvement upon the original Wolhaupter tie plate. The invention does not consist in putting a rail-abutting shoulder upon a tie plate. And the concession that rail-abutting shoulders

were old in the tie plate art presents no obstruction to the validity of a claim in which the rail-abutting shoulder is one of several elements. In this instance, also, the question is whether invention was involved in producing this specific and limited combination. No prior structure of the practical or of the paper art either meets these limited claims or suggests, out of all possible relationships of the elements, the particular relationship that is here claimed. For the reasons stated in connection with the other patents, we are unable to find that the defense of non-invention is properly sustained.

IV. In developing its commercial tie plate appellant dropped from view many of the separate inventions embodied in other claims of these patents; but it brought into one structure the several inventions of the claims in suit. We have found that none of these claims is nullified by the prior art or limited by anything more than its own terms. So respecting infringement the question is whether these claims read upon the structure put forth by the appellees. A photographic reproduction of appellees' tie plate is as follows:



As this tie plate is substantially a copy of appellant's commercial structure, the real inquiry is whether appellant has abandoned its own inventions. To us it seems clear that this tie plate responds in letter and in spirit to the terms and meaning of the claims in suit. We have no difficulty in perceiving a railway tie plate formed on the under side with devices more or less sharpened adapted to penetrate and engage the tie and on its upper side with a series of flanges on which the rail rests. We also observe that the tie-engaging flanges extend parallel with and are directly beneath the rail-supporting flanges. It is likewise obvious that there is the specific and limited relationship of having the rail-abutting shoulder at one margin of and parallel with the rail-supporting flanges and of having both the rail-abutting flange and the rail-supporting flanges transverse to the tie.

The decree is reversed with the direction to order an accounting on the claim of the first patent and to enter an injunction and order an accounting on the claims of the second and third patents.

EXHIBIT E.

(No Model.)

B. WOLHAUPTER.

TIE PLATE.

No. 538,809. Patented May 7, 1895.

Fig. 2.

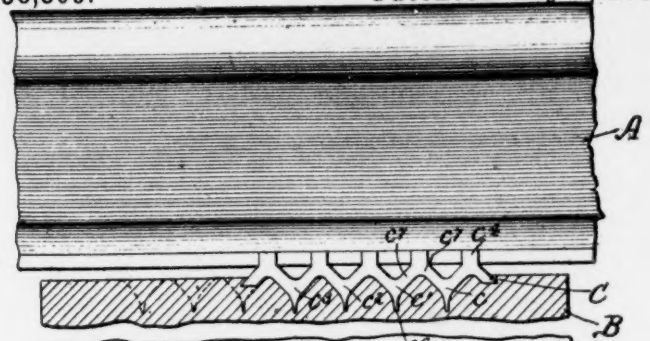


Fig. 1.

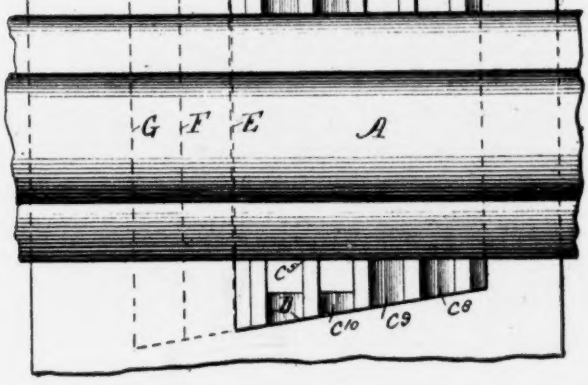
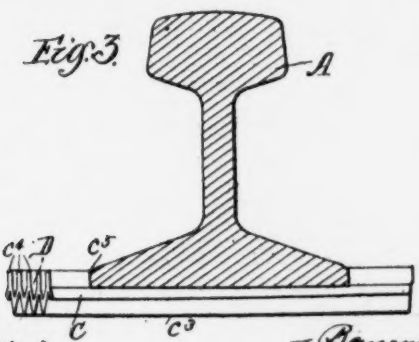


Fig. 3.



Witnesses.
Wm. M. Rheem.
Wm. F. Fleming.

Inventor.
Benjamin Wolhaupter
by Walter N. Lamberton

UNITED STATES PATENT OFFICE.

BENJAMIN WOLHAUPTER, OF MORGAN PARK, ILLINOIS.

TIE-PLATE.

SPECIFICATION forming part of Letters Patent No. 538,809, dated May 7, 1895.

Application filed March 13, 1895. Serial No. 541,521. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN WOLHAUPTER, a subject of the Queen of Great Britain, residing at Morgan Park, county of Cook, State of Illinois, have invented a certain new and useful Improvement in Tie-Plates; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Heretofore in the use of railway tie plates two general styles of plates have been employed. The plates were first put into use without top flanges, that is, flanges on the top of the plate against which the rail flange could abut and the plate thereby be utilized to prevent the lateral movement of the rail and consequent widening of the gage; but in the use of these smooth top plates it was found that the constant thrusts of the rail laterally tended to shear the spike and the latter had to be frequently renewed. To relieve the spike and obviate this item of renewals the plate was provided with a top ridge or flange against which the rail flange could bear, the flanges on the under side of the plate which engaged the tie supposedly holding the plate against any movement along the tie and the plate thereby relieving the spikes from the shearing action of the rail caused by its lateral thrust; but in the use of these plates with top flanges it has been found that the lateral thrust of the rail has caused the flanges on the under side of the plate to break or compress the wood fibers and allow the plate to creep along the tie longitudinally thereof. When the plate has once moved it has been practically impossible to again hold the top flange against the rail flange after the rail has been returned to its original and proper position, since the under flanges have no wood to abut against, the result being that even with the top flange on the plate, the spike has had to take the thrust of the rail after the plate has been in use a short time thus rendering useless this top flange and soon shearing the spike.

My invention has for its object the production of a plate which while being provided with the top flange to receive the thrust of the rail is so constructed on its under side that after it has been moved by the lateral pressure of the rail it, together with the rail can be easily moved back to the proper position to maintain the gage, and be held in that position even more firmly than when originally laid.

The invention further contemplates a form of plate provided with top and under flanges which shall be extremely strong in its construction and effective in its designed use, and yet easily rolled or formed into shape as well as very light weight.

It consists in a combination of devices and appliances hereinafter described and claimed.

In the drawings, Figure 1 is a plan view of the rail and plate thereon and portion of the tie. Fig. 2 is a side elevation of the rail, showing an end elevation of the plate. Fig. 3 is a cross-section of the rail and side elevation of the plate.

In carrying out the invention A represents the track rail, B the tie, and C the tie plate. The plate is preferably, although not necessarily formed into the shape shown more particularly in Fig. 2, that is to say, what may be termed a trussed shape so that flanges are provided on both the under side as at c, c', c^2, c^3 and top sides as at c^4. On the top side a way c^5 for the rail or what may be termed the rail seat is provided. The flanges on the under side are preferably shaped with comparatively sharp edges c^6 so that they will readily enter and separate the grain of the tie. As will be seen when in position these under flanges extend parallel with the grain of the tie, the ends being substantially blunt or square and forming abutments to prevent so far as possible the plate from creeping along the tie. It will be observed that by this form of plate there is much less opportunity or chance of buckling than with the ordinary flat plate since each point where the rail rests upon the plate, is supported and trussed by metal which is more or less on edge instead of on its side, thereby forming for each resting point of the rail two girders c^7 joined at the apex by the top flanges c^4 where the rail rests. By the above construction also the wood between the flanges c, c', c^2, c^3 will, because of the sloping of the approaching sides of the flanges be compressed between the flanges, thereby greatly aiding in sustaining the weight put upon the plate, and also in excluding moisture from the wood under the plate. A form of plate such as I have just de-

scribed is also of material advantage in that I am enabled to make it much lighter in weight. In this construction of plate with the same amount of material as is ordinarily used in tie plates a much stronger plate is obtained. Heretofore it has been a commercial necessity in order to get the price of plates where they could be sold for use on the cheaper grade of ties, to reduce and diminish as far as possible the material and consequently the weight of the plate. The result has been that with the plate flat and thin it has buckled when the rail pressure has been brought on it thereby damaging the tie as well as rendering the plate useless as a bearing for the rail; but in my construction since the points where the rail rests are supported by metal more or less in upright position the plate is greatly strengthened without addition of weight. So also by a construction as above the top of the plate where the rail is seated comprises a series of flat portions with a series of depressions between, so that while there is abundant wearing surface between the rail and plate, there is space for sand, cinders, etc., to work out. Again, these depressions permit the draining off of water and moisture so that in cold weather the top of the plate particularly the space between the rail and plate is not covered with ice and the friction between the rail and plate thereby either lessened or obviated entirely.

I will now describe the second feature of the invention, viz., the ability to adjust the plate to take up any widening of the gage due to the lateral movement of the plate and rail. The ends of the engaging flanges on the under side of the plate are regularly stepped or cut on a diagonal line as compared with the rail flange. It is of course obvious that the ends of the flanges might be cut on this diagonal line or the entire end of the plate cut in this way. In my present drawings I have shown the latter construction, the entire end of the plate being sheared diagonally as at D.

The operation is as follows: The plate is of course originally engaged to the tie in such a location as that the rail will be in proper position to form the proper gage of track. Each of the flanges c to c^3 will displace enough of the fiber to allow them to enter the face of the tie. After the plate has been in use some time the lateral pressure of the rail will move the plate to a greater or less extent along the length of the tie and the ends d of each flange c to c^3 will compress the fiber in advance of it. Now if the plate is removed there will be a series of indentations or perforations in the face of the tie made by the flanges c to c^3 and these indentations or perforations will be stepped or on a diagonal line. The plate is now replaced on the tie with the edge E moved to a position shown by dotted lines F. This will bring each flange c to c^3 into the indentation or perforation originally occupied by the flange next adjacent with the exception of the flange c^3 nearest the edge E, this flange making a new indentation for itself. Now if the end d of each flange c to c^3 is brought to a bearing against the end of the indentation made by the next preceding flange and the ends of these flanges are on a diagonal line as compared to the rail flange, the plate will be found to have moved lengthwise of the tie a distance equal to the difference between the length of each plate flange measured from its end to the rail flange. Now as will be seen this movement of the plate lengthwise of the tie will force the rail laterally a corresponding distance, thus restoring the desired gage of the track. If one shifting of the plate is not sufficient to take up the abnormal width of the gage, or if after the plate has been shifted, it again gives way to sufficiently widen the gage the edge E can be shifted to the position shown by dotted lines G.

It will be seen by the above description that I have described only one end of the plate as having the flanges stepped or on a diagonal line. In practice, however, both ends could and probably would be beveled or stepped and as I will presently explain this will give an opportunity to reverse the plate end for end and obtain additional adjustments. It is obvious that after the second adjustment the flange c' will occupy the space originally occupied by the flange c^3. Now by reversing the plate end for end, the end c^3 of the flange c would be in the indentation originally occupied by the flange c^3. Therefore by making the distance between the rail flange and the end c^3 one step greater than the distance from the rail flange to the end c' an additional adjustment is gained when the plate is reversed and by making the ends c^3, c^{10} respectively a step longer than the preceding flange two more adjustments are gained. It will thus be seen that after the plate is laid it can be shifted twice, then turned end for end (an adjustment being gained by the turning) and then shifted twice, making in all five adjustments. It is obvious, however, that the number of adjustments can be greatly increased if desired, only being limited by the width of the tie.

A material advantage in thus employing the indentations for another flange after they have once been made by a preceding flange, is that every time the plate shifts, by virtue of the pressure of the rail laterally, it compresses the fibers in advance of it so that by the time the plate has been adjusted once or twice it takes much more pressure and a much longer time for the rail to shift it more.

Another feature of the invention is the provision of the pairs of spike holes in diagonal corners. This is for the purpose of permitting the spike to be driven into the old spike hole in the tie after the plate has been adjusted, thus obviating the necessity of driving a new hole in the tie every time the plate is adjusted, and thus spoiling the tie.

It is obvious that the construction just described is susceptible of many changes, and

the prime object of the invention still be attained. For instance, the under flanges might be divided, or instead of flanges they might be merely projections and the plate instead of having its end beveled might be square, and the under flanges alone be stepped; or but a single end of the plate need be stepped; or the flanges having one or more of their ends stepped might be applied to a flat plate or to the numerous other constructions of plates now on the market.

In all of the above named variations the principle employed is the same and each would embody the essential idea of my invention which consists in providing a plate on its under side with a series of stepped flanges or projections, that is to say, flanges or projections arranged on a diagonal line with respect to the rail flange.

What I claim is—

1. The combination with the rail and tie of the tie plate provided with a series of stepped tie engaging flanges or projections on the under side, each arranged to fit into the perforation made by the flange or projection next adjacent, whereby when the plate is shifted transversely of the tie it is also shifted longitudinally thereof, substantially as described.

2. The combination with the rail and tie of the tie plate provided on its under side with a series of engaging flanges, adapted to enter the tie at least one end of said plate and flanges being cut on a diagonal line with relation to the rail flange, substantially as described.

3. The combination with the rail and tie, of the tie plate provided on its under side with one or more engaging flanges, adapted to enter the tie extending parallel with the grain of the tie, the opposite ends of said flange or flanges being different distances from the vertical plane of the rail, substantially as described.

4. The combination with the rail and tie of the tie plate provided on its under side with a series of tie engaging flanges or projections, adapted to enter the tie the ends of the flanges or projections at one end of the plate being a greater aggregate distance from the rail flange than the ends of the flanges at the other end of the plate, substantially as described.

5. The combination with the rail and tie of the tie plate provided on its under side with a series of engaging flanges or projections, adapted to enter the tie the ends of which are with respect to each other a variable distance from the vertical plane of the rail flange, the ends of the flanges or projections at one end of the plate aggregating a greater distance from the rail flange than those at the other end of the plate, substantially as described.

6. The combination with the rail and the tie of the tie plate provided on its under side with a series of flanges adapted to enter the tie and at least a portion of which project beyond the vertical plane of each edge of the rail flange, the series of flanges on one side of the vertical plane of the rail flange being longer than those on the other side, substantially as described.

7. The combination with the rail and tie of the tie plate, provided on its under side with a series of flanges adapted to enter the tie and at least a portion of which projects beyond the vertical plane of each edge of the rail flange, at least one end of each flange being arranged on a diagonal line with respect to the rail flange, the series of flanges on one side of the rail flange being longer than the series on the other side, substantially as described.

8. *A railway tie plate formed on the under side with devices more or less sharpened adapted to penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests, substantially as described.*

9. A railway tie plate formed with flanges on the under side for entering and engaging the tie parallel with the grain thereof and having on the upper side depressions parallel with and vertically above the flanges on the under side, substantially as described.

10. A railway tie plate the body of which is formed into a series of arches, the lower edges of said arches being provided with tie-entering and engaging devices or flanges, substantially as described.

11. A railway tie plate the body of which is formed into a series of arches the lower edges of which are provided with tie-entering and engaging flanges, and the upper side of the plate having a series of depressions vertically above said engaging flanges, substantially as described.

12. A railway tie plate provided on its under side with tie engaging flanges more or less sharpened extending parallel with the grain of the tie, and with spike holes extending through said flanges, substantially as described.

13. A tie plate provided with at least four spike holes arranged in pairs in diagonal corners of the plate, substantially as described.

14. The combination with the rail and the tie of the plate having on its under side one or more holding flanges or projections adapted to enter and perforate the tie, and at least one or more additional flanges or projections on the plate, the latter being a different distance from the vertical plane of the rail and on a plane parallel with the length of the tie, different from the first named flange or projection whereby when the position of the plate is changed so that the second flange enters the perforations originally occupied by the first, the plate has been shifted along the length of the tie, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

BENJAMIN WOLHAUPTER.

Witnesses:

W. H. CHAMBERLIN,

FLORENCE EMBREY.

EXHIBIT F.

No. 691,332. Patented Jan. 14, 1902.

B. WOLHAUPTER.

RAILWAY TIE PLATE.

(Application filed May 8, 1897. Renewed Nov. 9, 1901.)

(No Model.)

Fig. 1

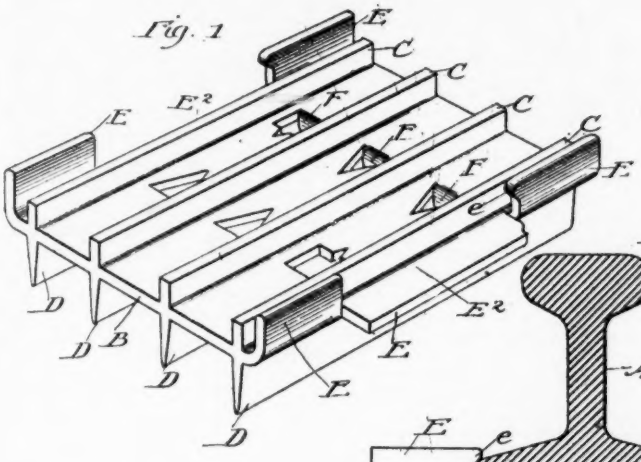


Fig. 2.

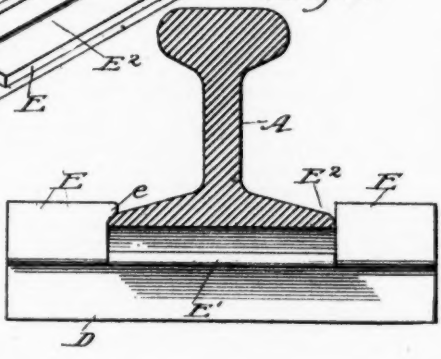


Fig. 3.

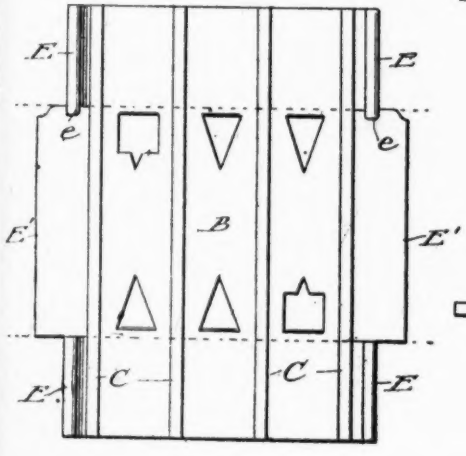
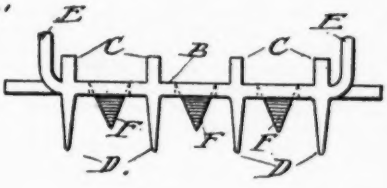


Fig. 4.



Witnesses:
Frank S. Blanchard
Jos. M. H. Chamberlin

Inventor:
Benjamin Wolhaupter
By Walter H. Franklin
Attorney.

UNITED STATES PATENT OFFICE.

BENJAMIN WOLHAUPTER, OF CHICAGO, ILLINOIS.

RAILWAY-TIE PLATE.

SPECIFICATION forming part of Letters Patent No. 691,332, dated January 14, 1902.
Application filed May 3, 1897. Renewed November 9, 1901. Serial No. 81,780. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN WOLHAUPTER, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have invented a certain new and useful Improvement in Railway-Tie Plates, (Case F;) and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

It has been found in the use of tie-plates for railroads that there is a material advantage in providing on the upper side of the plate one or more flanges on which the rail-base can rest, so that channels or depressions are provided between the rail-base and the body of the plate proper.

My invention has for its object the production of a tie-plate which while incorporating this feature of flanges on the upper side for sustaining the rail will have the flanges on the lower side so arranged and disposed that there is the least liability of the plate buckling.

To this end, therefore, the invention primarily consists in the provision on the upper side of a tie-plate of one or more flanges or projections for sustaining the rail and on the under side flanges for entering the tie parallel with the grain thereof, the flanges on the lower side being located directly or substantially beneath those on the upper side.

The invention further consists in the provision at each side edge of the plate of flanges which project upward above the rail-base when the latter is on its sustaining-flanges to receive the lateral thrust of the rail.

The invention also consists in other minor features hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of a tie-plate embodying my invention. Fig. 2 is a side elevation of the plate with the rail shown thereon in section. Fig. 3 is a plan view of the plate, and Fig. 4 is an end elevation thereof.

In carrying out the invention, A represents the rail, and B what I will term the "body proper" of the plate. Located on the upper side of the plate is a series of four upwardly-projecting flanges C. These flanges are preferably, although not necessarily, flat on their upper edges, and their sides are parallel. On the lower side of the plate is a series of four tie-engaging flanges D, extending parallel with and directly beneath the flanges C. These flanges D are preferably deep and narrow or thin, so that they will readily enter the grain of the tie and become embedded therein. At each side of the plate the metal is turned up to form the flanges E, and the middle portion is extended out in a horizontal direction, as at E′, so that a recess E^2 is formed, in which the rail-base sets, the flanges E thus constituting abutments to receive the lateral thrust of the rail. If desired, the portion E′ when it is cut out of the portion E may be so shaped as to provide projections *e*, which fit over the rail-base and hold the latter from tilting. In addition to the flanges which I have just described I may, if I desire, punch out triangular-shaped teeth F and turn them down, as shown in Fig. 4, so that entering the tie they will help the flanges D to prevent the plate moving along the tie.

It will thus be seen by the above construction that I have provided a plate wherein the rail is sustained above the body of the plate by flanges on the upper side of the plate and that directly beneath these flanges are located the tie-engaging flanges, so that the weight will be sustained at the points where there is the greatest pressure on the plate. In addition to this I have provided the flanges E to prevent lateral movement of the rail on its supporting-flanges, and I have also provided an additional means in the shape of the triangular teeth to prevent the movement of the plate on the tie.

What I claim is—

1. *A railway-tie plate provided on its upper side with one or more flanges on which the rail may rest or by which it is directly sustained and on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, substantially as described.*

2. *A railway-tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained and on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath*

the latter and sharpened to permit them to readily enter the tie, substantially as described.

3. *A railway-tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained, on the under side with one or more sharpened tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, and on the upper side with an additional flange or flanges extending above the plane of the rail-sustaining flanges and adapted to receive the lateral thrust of the rail, substantially as described.*

4. A railway-tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained, on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, and on the upper side with an additional flange or flanges extending above the plane of the rail-sustaining flanges and adapted to receive the lateral thrust of the rail, said flange or flanges provided with one or more projections adapted to project over the rail-base, substantially as described.

5. A railway-tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained, on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, and on the upper side, with an additional flange or flanges extending above the plane of the rail-sustaining flange and adapted to receive the lateral thrust of the rail, said plate also provided with one or more teeth turned down from the metal composing the body of the plate, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

BENJAMIN WOLHAUPTER.

Witnesses:

DE WITT W. CHAMBERLIN,
ESTHER M. ROTHELLE.

EXHIBIT G.

No. 721,644. PATENTED FEB. 24, 1903.

B. WOLHAUPTER.

TIE PLATE.

APPLICATION FILED MAR. 31, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1

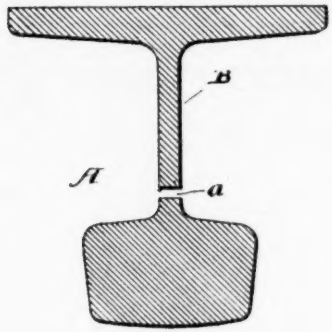


Fig. 2

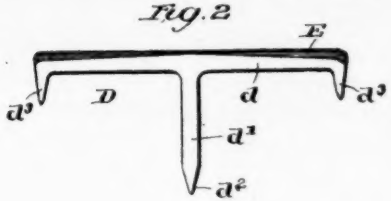


Fig. 3

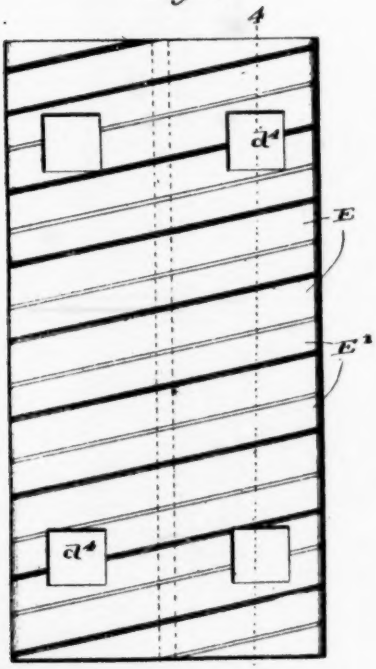
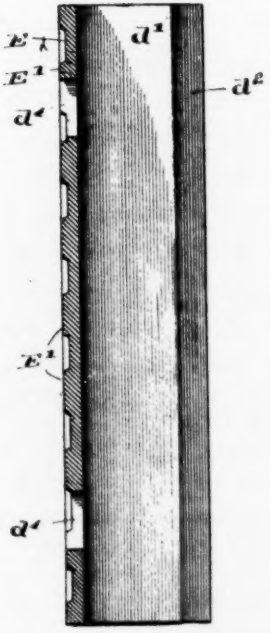


Fig. 4



Witnesses:
Harold G. Barratt
Earl H. Crawford

Inventor:
Benjamin Wolhaupter
By Poole & Brown
Attys

No. 721,644. PATENTED FEB. 24, 1903.

B. WOLHAUPTER.

TIE PLATE.

APPLICATION FILED MAR. 31, 1902.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 5.

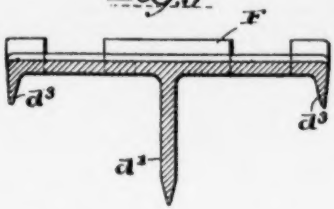


Fig. 8.

Fig. 6.

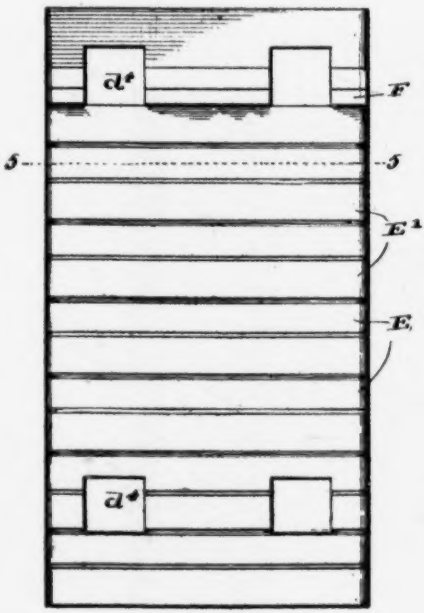
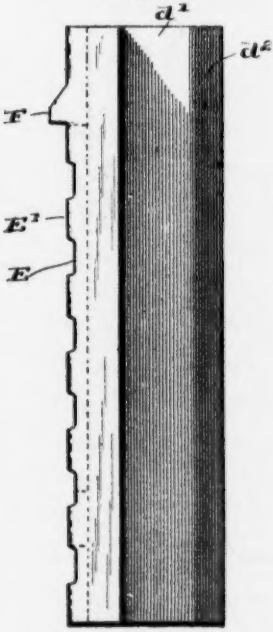


Fig. 7.



Witnesses:
Harold G. Smith
Carl H. Crawford

Inventor:
Benjamin Wolhaupter.
By Poole & Brown
Attys.

UNITED STATES PATENT OFFICE.

BENJAMIN WOLHAUPTER, OF CHICAGO, ILLINOIS.

TIE-PLATE.

SPECIFICATION forming part of Letters Patent No. 721,644, dated February 24, 1903.

Application filed March 31, 1902. Serial No. 100,667. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN WOLHAUPTER, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful improvements in Tie-Plates; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in railway-tie plates and embraces, among others, the following objects: first, the manufacture of a tie-plate made from old or discarded railroad-rails, whereby the cost of manufacture will be greatly cheapened; second, the manufacture of a tie-plate which will more firmly cling to the ties than those heretofore in common use; third, the manufacture of a tie-plate with the least amount of metal consistent with durability and strength, with a view of cheapening the cost of manufacture, and, fourth, the manufacture of a tie-plate of such configuration upon its surface that water, sand, or other deleterious material will be drained off or away from the same. These and other objects of the invention will be readily comprehended from the accompanying drawings and the description thereof and will be more clearly pointed out in the claims appended hereto.

In said drawings, Figure 1 illustrates in cross-section the two parts of an ordinary railway-rail separated and from one of which my tie-plate may be made. Fig. 2 shows an end view of one form of the tie-plate embodying my invention. Fig. 3 is a top plan view of another form of my tie-plate. Fig. 4 is a longitudinal vertical sectional view taken upon the line 4 4 of Fig. 3. Fig. 5 is a sectional view taken upon the line 5 5 of Fig. 6, showing another modified form of tie-plate. Figs. 6 and 7 are respectively top plan and side views of the form of tie-plate shown in Fig. 5. Fig 8 illustrates in an end view still another modification.

In said drawings, A represents as a whole an old railroad-rail which has been cut or split lengthwise at *a*, leaving the flange and the web in one piece B and the head in another piece C. The latter forms a convenient billet for the manufacture of harrow-teeth or other light articles as commonly made, or it may be rolled out into a billet-plate in a familiar manner. The piece B forms a shape ready to be manufactured into my improved tie-plate with very little additional rolling.

It is not thought necessary to illustrate or to describe the various steps to which the part B of the old rail is subjected before it becomes the finished tie-plate shown in Fig. 2. It will be understood by those skilled in the art that the part B goes through several passes in the rolls for the purpose of widening the foot-flange of the rail and making it of equal thickness from end to end, while the web would desirably be made thinner and with parallel sides and the extreme ends or points sharpened. This tie-plate (lettered D) as a whole consists of a plate proper, *d*, provided longitudinally with a central flange d', having parallel sides and a sharpened end d^2 in order that the flange may enter the fibers of the wood easily and deeply. The side margins of the plate *d* are provided with longitudinally-arranged flanges d^3, each projecting in the same direction as the flange d', each being sharpened at its end, but each being shorter than the flange d'.

d^4 d^4 are suitable spike-holes extending through the tie-plate *d*. As a preferred construction I have shown the outside edges or faces of the side flanges d^3 as being inclined downwardly and inwardly toward the central flange d'. These may, however, be rolled with the side faces parallel with the faces of the central flange d'.

The upper surface of the plate D is provided with a series of sand spaces, channels, or grooves E E. These grooves are tapered or inclined away from the center—that is to say, the groove is deepest at the side margins of the plate above the flange d^3 and is shallowest over the flange d'. In the form shown in Figs. 5, 6, and 7, however, the groove is of equal depth throughout its length, while in the form shown in Fig. 8 the groove follows the inclination of the form shown in Fig. 2, but with this distinction: The grooves in Fig. 2 practically unite in the center, while they do not so unite in the form shown in Figure 8. The grooves may extend squarely across the tie-plate and the flanges, as shown

in Fig. 6, or they may extend in a diagonal line, as shown in Fig. 3, the object being to so dispose the grooves as to provide sand-spaces below the rail-bearing surface.

Between the grooves E, I provide transversely-arranged bars or ribs E', which extend from side to side of the plate and serve not only to stiffen the latter, but also act as a tie to hold the flanges d' and d^3 firmly together. These bars E' may also run in a diagonal manner, as is shown in Fig. 3, or at right angles, as shown in Fig. 6.

In the form shown in Figs. 2 and 5 the channels or grooves do not extend to the surface of the bars E', whereas in the form shown in Fig. 8 the channels E extend only part way across the tie-plate, leaving a flat space E^2 at the center. In the form shown in Figs. 5, 6, and 7 it may be desirable to use one or more shoulders for the rail-flange, and such rail-abutting shoulder is shown at F. The object being to drain the water or sand from the rail-bearing surface of the tie-plate, it is obvious that the channel shown in Fig. 5 will accomplish that purpose, and therefore I do not limit my invention to facing the channels with sloping bottoms across the tie-plate, since manifestly these channels may be faced in any desired direction.

The flanges d^3 serve an important purpose in addition to stiffening the tie-plate proper—that of confining the fiber of the wood beneath the plate. The inside sloping faces of these flanges d^3 tend to force the wood inward and toward the central holding-flanges d', thus forcing the wood of the tie to a firm and close contact with the central flange, and thereby preventing its withdrawal. I am aware that tie-plates have heretofore been made with a central flange. These, as I understand, have been abandoned, it being found that the loading of the rail comes upon one edge and that the opposite edge rises off the tie, and thus sucks in water and sand beneath the tie-plate to the great detriment of tie-plates as well as the tie, each of which is thus more rapidly destroyed. By placing the flanges d^3 upon the outer margins of the tie-plate this tendency of water and sand to suck in underneath the tie-plate or between the tie-plate and the tie is entirely prevented, and the tie is thus preserved and its life is thus prolonged. Of course it will be understood that my tie-plate D will be placed upon the tie longitudinally—that is to say, so that the flanges d' and d^3 will be parallel with the grain of the wood.

It will be manifest from the foregoing description that my tie-plate may be easily manufactured, that it will be cheap and durable, and that it possesses all of the elements of strength with none of the disadvantages of tie-plates heretofore in use, which are provided with flanges. It will also be observed that my tie-plate may be cheaply manufactured, because by making it from old railway-rails, split as shown in Fig. 1, the body of the plate and the deep central flange are already formed, and it therefore requires fewer passes through the rolls to complete the plate than if made from a square billet, as is commonly done.

What I claim, and desire to secure by Letters Patent, is as follows:

1. A tie-plate provided on its lower surface with flanges running lengthwise of the plate, and in its upper surface with channels or grooves running across the flanges on its lower surface.

2. A tie-plate provided on its lower surface with one or more longitudinally-arranged flanges, and on its upper surface with transversely-arranged channels or grooves which extend across the plate and reach to both side margins of the same.

3. A tie-plate provided on its lower surface with longitudinally-arranged flanges, and in its upper surface with channels or grooves, extending diagonally across the lower flanges, said channels or grooves sloping downwardly from the center of the plate and reaching to the side margins thereof.

4. A tie-plate having a deep central flange provided with vertical sides, and two side flanges arranged parallel with the central flange, and with the grain of the wood on which the tie-plate is to be used.

5. A tie-plate provided with channels extending transversely across the top of the plate and with flanges arranged longitudinally on the bottom of the plate and in a direction to cross the channels, said flanges being inclined on their inner faces to compress the fiber of the tie.

6. A tie-plate provided on its lower faces with flanges running lengthwise of the plate and upon its upper surface with channels or grooves running in a direction diagonally across the flanges below.

7. *A tie-plate provided in its rail-supporting surface with transverse grooves or channels, and at one margin of said supporting-surface with a transverse rail-abutting shoulder.*

8. A tie-plate provided on its lower surface with longitudinally-arranged flanges, and having in its rail-supporting surface transversely-arranged channels or grooves and at one margin of said surface a transverse rail-abutting flange.

9. *A tie-plate provided in its rail-supporting surface with transverse grooves or channels, reaching to the edge of the plate, and at one margin of said surface a transverse rail-abutting shoulder.*

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 29th day of March, A. D. 1902.

BENJAMIN WOLHAUPTER.

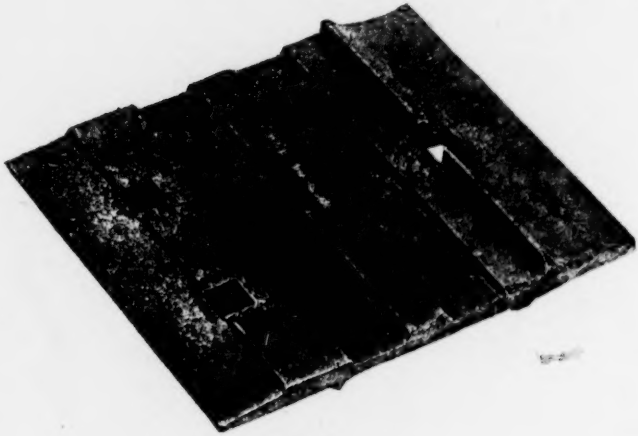
Witnesses:

TAYLOR E. BROWN,

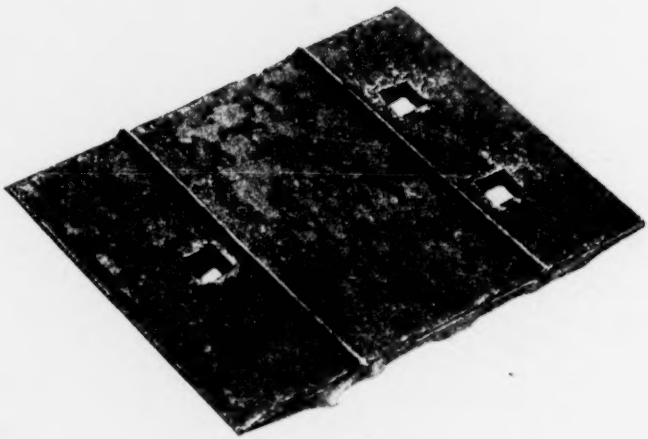
WILLIAM L. HALL.

EXHIBIT H.

Defendant's Tie Plate.



TOP VIEW.



BOTTOM VIEW.

FILED
FEB 20 1915
JAMES D. MAHER
CLERK

No. [redacted] 67

IN THE

Supreme Court of the United States

OCTOBER TERM, A. D. 1914.

THE HART STEEL COMPANY and GUILFORD S. WOOD, *Petitioners,* **vs.** **THE RAILROAD SUPPLY COMPANY,** *Respondent.*	Petition for Writ of Certiorari to the Circuit Court of Appeals of the United States for the Seventh Circuit.

BRIEF IN SUPPORT OF PETITION FOR CERTIORARI.

FRANK F. REED and
EDWARD S. ROGERS,
Solicitors for Petitioners.

FREDERICK P. FISH,
Of Counsel.

GUNTHORP-WARREN PRINTING COMPANY, CHICAGO.

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IN THE

Supreme Court of the United States.

OCTOBER TERM, A. D. 1914.

THE HART STEEL COMPANY and GUILFORD S. WOOD, *Petitioners,* vs. **THE RAILROAD SUPPLY COMPANY,** *Respondent.*	Petition for Writ of Certiorari to the Circuit Court of Appeals of the United States for the Seventh Circuit.

BRIEF IN SUPPORT OF PETITION FOR CERTIORARI.

I.

THE GROUNDS FOR ALLOWANCE OF PETITION.

(a) Diversity of Rulings of Two Circuit Courts of Appeal. The Elyria Iron & Steel Company, an Ohio corporation, located at Elyria, Ohio, on September 1, 1908, through the medium of the Hart Steel Company, a New York corporation, with offices in Elyria, Ohio, New York City, Chicago, and elsewhere, as the sales agent or selling department of the Elyria Iron and Steel Company, agreed to make for and sell to the Atchison, Topeka & Santa Fe Railway Company, operating an extensive railroad system, 5000 tons of tie plates of a form designated by the Railway Company and the Railway Company agreed to protect maker and agents against

loss by patent infringement and to handle any such litigation by its attorney and under its direction. The 5000 tons of tie plates of the form specified were made by the Elyria Co. and delivered to the Railway Company prior to December 9, 1908. Thereupon the Railroad Supply Company, owner of three certain letters patent for tie plates issued to Benjamin Wolhaupter on December 9, 1908, brought a suit in equity in the United States Circuit Court for the Northern District of Illinois against the Hart Steel Company and Guilford S. Wood, its manager, for infringement of certain claims of the three Wolhaupter letters patent by the sale of the 5000 tons of tie plates above named, and on March 26, 1909, the same company brought another suit in Equity in the United States Circuit Court for the Northern District of Ohio, Eastern Division, against the Elyria Iron and Steel Company for the manufacture and sale of the same 5000 tons of tie plates to the same Railway Company. The Railway Company was not a party to either proceeding, but with the knowledge and consent of all the defendants and with the knowledge of the complainant and in compliance with its guaranty, assumed and conducted the defenses of both suits. The Elyria Company owns all the stock of the Hart Steel Company and the latter is the sales agent or selling department as to tie plates of the Elyria Company. Both companies have the same president. All of these facts appear of record in the suits. Both suits were bottomed on the same claims of the same three letters patent and in both the alleged infringing articles were the identical tie plates in the 5000 ton lot; the same defenses generally and in detail were set up, the same proofs on behalf of all parties were taken and the records are identical except as to a few formalities. The Illinois suit was first heard and dismissed for want of equity on December 28, 1911, on the ground that

if the claims sued on were valid, there was no infringement. (Exhibit A to Petition, 193 F. R., 418.) The Ohio suit was dismissed for want of equity by Judge Wm. Day on March 4, 1912, after independent consideration on the same grounds. (Exhibit B to Petition.) On appeal in the Ohio suit the decree of the Circuit Court was affirmed by the Circuit Court of Appeals on April 7, 1914, upon the grounds that if valid the claims were not infringed and that all the claims in issue were anticipated and void for want of patentable novelty. (Exhibit C to Petition, 213 F. R., 789.) A motion to affirm the decree of the Illinois court on the ground of *res judicata* was made in the pending appeal in the Circuit Court of Appeals of the Seventh Circuit on October 6, 1914, and overruled, and on January 5, 1915, that court reversed the decree of the Circuit Court holding all of the claims specified, valid and infringed, directing an accounting as to the earliest patent which had expired pending suit and an injunction and accounting as to the claims of the remaining two patents which will expire in 1919 and 1920 respectively.

There is thus presented a situation where two Circuit Courts and one Circuit Court of Appeals have upon identical records squarely differed from another Circuit Court of Appeal upon the construction, scope and validity of the same claims of the same letters patent and in which the second Court of Appeals has refused to adjudge as binding and conclusive a prior holding of another Circuit Court of Appeals upon the same subject matter, issues and evidence and between parties identical or in privity and has practically nullified the decree first entered. The embarassment, uncertainty and confusion that must result as well as the general and public importance of the questions presented, make a case for review by this court

and justify the application for and issuance of the *writ of certiorari.*

Kessler v. *Eldred,* 206 U. S., 285.
Brill v. *Washington Ry. & Electric Co.,* 215 U. S., 527.
Brill v. *Peckham Motor Truck & Wheel Co.,* 189 U. S., 57.
Smith v. *Vulcan Iron Works,* 165 U. S., 518.
Mast, Foos & Co. v. *Stover Mfg. Co.,* 177 U. S., 485.
Castner v. *Coffman,* 178 U. S., 168.
Forsyth v. *Hammond,* 166 U. S., 506.

(b) Res judicata. The decision of the Circuit Court of Appeals for the Sixth Circuit was announced and the decree of affirmance entered April 7, 1914. At the first opportunity (October 6, 1914) petitioners presented a motion to the Circuit Court of Appeals of the Seventh Circuit for affirmance of the decree of the Circuit Court on the ground that the Sixth Circuit decision was *res judicata* because of identity and privity of the parties and identity of subject matter and evidence in both suits, but the motion was overruled and after argument and submission on November 10, 1914, the decree of reversal was entered January 5, 1915.

(1) *The record defendants are in privity and the later decree nullifies the former.*

The embarrassment and confusion consequent upon this action of the Seventh Circuit Court upon both the record defendants in the suits and the Atchison, Topeka and Santa Fe Railway Company and its effect on the decision of the Sixth Circuit Court are apparent. The decree of the Circuit Court of Appeals of the Sixth Circuit in *Railroad Supply Co.* v.

Elyria Iron & Steel Co., not only made *the manufacture* of the 5000 tons of tie plates lawful by declaring such tie plates not infringements of and the claims of the letters patent void, but made the use thereof by the Atchison, Topeka & Santa Fe Railway Co. lawful; gave the right to the Elyria Company to make, use and sell the same device throughout the United States and gave to its sales agent (The Hart Steel Company) and to all future purchasers and users of its manufacture of the same device complete right to sell and use the device. That decree as long as it stands makes The Elyria Iron & Steel Company, its sales agents and purchasers from it of the device, immune from liability to the Railroad Supply Company as to that form of tie plate under the claims of the Wolhaupter patents sued on.

Kessler v. *Eldred*, 206 U. S., 285.
Birdsell v. *Shaliol*, 112 U. S., 485.
Hurd v. *Seim*, 191 Fed., 832.
Marshall v. *Bryant Electric Co.*, 185 F. R., 499.

(2) *The effect of the later on the Railway Company.*

But in addition to the relations existing between the Elyria Iron & Steel Co. and The Hart Steel Co. as principal and sales agent, and by reason of ownership of the entire capital stock of the agent by the principal, and between the Elyria Iron & Steel Company and the Railway Co. as seller and purchaser of an alleged infringing device there exists the additional relation that the defense of both suits was made by the Railway Co. with the knowledge and consent of all defendants and the knowledge of the complainant. Thus the decree in the Sixth Circuit was binding on the Railway Company. So for the same reason is the decree in the Seventh Circuit. This results in the anomalous, and it could with propriety be said unprecedented, situation of a subsequent decree

of another court on precisely the same issues, subject matter, evidence, parties and privies, in effect overturning and nullifying the first decree and making illegal and enjoining what the prior decree had adjudged to be lawful and permissible. Under the Sixth Circuit decree the Elyria Iron & Steel Co. lawfully and without infringement of the Wolhaupter letters patent owned by the Railroad Supply Company made and sold the 5,000 tons through the medium of its sales agent, The Hart Steel Co., to the Railway Co.; under that decree the Railway Co. lawfully purchased and may use those plates; under that decree the Elyria Co. may continue to make, use and sell, directly and through agents the tie plate in question; under that decree the Railway Co. may in future purchase such tie plates from the Elyria Co. and lawfully use such tie plates in track. This present and future use by the Railway Co. results not only from its rights as purchaser from an adjudged, lawful maker, but by reason of its privity as the real defender of the suit in the Sixth Circuit. But under the subsequent decree of the Seventh Circuit Court of Appeals, the Hart Steel Co., sales agent must account for the sale of the identical 5,000 tons of tie plates adjudged to have been lawfully made and sold by the Elyria Company and is enjoined from selling like plates in future. And the Railway Company by reason of its privity as acknowledged defender of the suit may be both liable for damages on accounting and subject to punishment for violation of the injunction. And the Railway Co., though free under the decision of the Sixth Circuit Court of Appeals to buy this form of tie plate from the Elyria Co. and use such purchases in track will violate the directed injunction of the Seventh Circuit Court of Appeals entered in a suit to which the Railway Company is practically a party by doing the

very things which the Sixth Circuit Court of Appeals has adjudged lawful in a suit where the Railroad Supply Company was complainant and the Railway C . a privy to the defense. The situation is cogent both for sustaining the motion made by petitioners in the Seventh Circuit Court to affirm the decree below on the ground of *res judicata* and for granting the review sought in this court.

Kessler v. *Eldred*, 206 U. S., 285.

Brill v. *Washington R. & E. Co.*, 215 U. S., 527, 530.

Rubber Wheel Tire Co. v. *Goodyear Tire & R. Co.*, 232 U. S., 413, 417.

Penfield v. *C. & A. Potts & Co.* (C. C. A., 6th Cir.), 126 Fed. Rep., 475, 489.

Warren Featherbone Co. v. *DeCamp*, 154 F. R., 198, 199.

D'Arcy v. *Staples & Hanford Co.*, 161 F. R., 733, 735.

Empire State Nail Co. v. *American Solid Leather Button Co.*, 71 F. R., 588, 589.

David Bradley Mfg. Co. v. *Eagle Manuf. Co.* (C. C. A., 7th Cir.), 57 F. R., 980, 985.

The situation was not one for the application of the rule of comity under the doctrine of *Mast, Foos Co.* v. *Stover Manf. Co.*, 177 U. S., 485, but for the rule of *res judicata* because of identity of subject matter, issues, and evidence and identity and privity of litigants in accordance with the decisions of

Kessler v. *Eldred*, 206 U. S., 285.

Brill v. *Washington R. & E. Co.*, 215 U. S., 527.

II.

THE MERITS OF THE CASE.

(A) THE WOLHAUPTER LETTERS PATENT AND ALLEGED INVENTION.

(1) *The claims of the letters patent in suit.*

The alleged invention, which is the real element claimed to have been secured by the Wolhaupter Letters Patent and sought to be protected by this litigation, consists in *channeling or ridging* the upper surface of a railway tie plate so as to secure strength with less weight and afford water and sand an outlet underneath the rail and an alleged rail support. While this *flanging or channelling* is claimed only in combination with the other features of tie engaging projections on the bottom of the plate and side or rail abutting flanges on the upper side, it is asserted to have been the element of invention first introduced by Wolhaupter. The Letters Patent sued on were Number 538,809, issued May 7, 1895, to Benjamin Wolhaupter; No. 691,332, issued January 14, 1902, and Number 721,644, issued February 24, 1903, to the same patentee. Complete copies of the drawings and specifications of these Letters Patent are annexed to the petition. The device of defendants was asserted to infringe these Letters Patent as follows:

The eighth claim of Letters Patent 538809, reading:

> "A railway tie plate formed on the under side with devices more or less sharpened adapted to penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests, substantially as described."

Also claims one, two and three of Letters Patent No. 691,332, which read:

> "1. A railway tie plate provided on its upper side

with one or more flanges on which the rail may rest or by which it is directly sustained and on the under side with one or more tie engaging flanges extending parallel with the upper flanges and directly beneath the latter, substantially as described.

2. A railway tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained and on the under side with one or more tie engaging flanges extending parallel with the upper flanges and directly beneath the latter and sharpened to permit them to readily enter the tie, substantially as described.

3. A railway tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained, on the under side with one or more sharpened tie engaging flanges extending parallel with the upper flanges and directly beneath the latter, and on the upper side with an additional flange or flanges extending above the plane of the rail sustaining flanges and adapted to receive the lateral thrust of the rail, substantially as described."

And likewise claims seven and nine of Letters Patent 721,644, which read:

"7. A tie plate provided in its rail supporting surface with transverse grooves or channels, and at one margin of said supporting surface with a transverse rail abutting shoulder.

* * * * *

9. A tie plate provided in its rail supporting surface with transverse grooves or channels, reaching to the edge of the plate, and at one margin of said surface a transverse rail abutting shoulder."

The device claimed to infringe these claims is shown as Exhibit "H" to the petition. All of these claims were held *not infringed if valid and also void for want of novelty and patentable invention* by the Circuit Court of Appeals for the Sixth Circuit, and all of them were held *valid and infringed* by the same device by the Circuit Court of Appeals for the Seventh Circuit.

(2) *The alleged invention.*

Although carefully disguised both in the Patent Office proceedings and by the record of complainant herein, the element of invention asserted to be covered by these claims in reality consists simply of ridging or channeling the rail supporting upper surface of railway tie plates. In the first two patents the flanges or ridges are claimed and in the third the grooves on channels. But as one cannot exist without the other both features are identical. This flanging and grooving was the only asserted new feature claimed to have been introduced into tie plates by Wolhaupter. It is not, however, claimed in any of the Letters Patent as in itself a new feature, but only in connection with the other elements of lower surface tie engaging projections and upper side rail abutting flanges. Briefly characterized, the eighth claim of the earliest Wolhaupter patent (No. 538809) claims a tie plate with upper flanges supporting the rail and lower tie engaging projections; the first and second claims of the next Wolhaupter patent (No. 691332) cover a tie plate with upper rail supporting flanges and lower tie engaging flanges parallel with the upper surface flanges and directly beneath the upper flanges; the third covers the same elements in connection with an upper rail abutting flange; and the seventh and ninth claims of the third Letters Patent (No. 721644) assert a monopoly in (claim 7) a tie plate with transverse grooves or channels on the upper surface and a transverse rail abutting shoulder, and (claim 9) upper grooves or channels extending across the plate and a rail abutting shoulder.

(B) The defenses.

The defenses interposed are:

(a) Denial of patentable novelty and invention.

(b) Aggregation and lack of patentable combination.

(c) Anticipation by prior patents, publications and tie plates used.

(d) Denial of infringement.

(a) There is no invention shown.

It would seem at least questionable whether, even if the idea originated in the patentee, mere channeling, and consequent ridging of a metallic plate, could be made the subject of a monopoly or rise above mere mechanical improvement. A railway tie plate is a metal plate interposed between the rail and tie for the purpose of conserving the tie and more firmly holding the rail in place. To channel or ridge the upper surface of this plate (and to channel is necessarily to ridge), and thereby secure lightness without impairing strength, and incidentally allow the escape of foreign substances, does not impress the ordinary mind as attaining the dignity of patentable invention. Indeed, in a number of cases, in some instances without requiring any evidence of prior use, courts have held such channeling or furrowing not patentable.

Servis R. R. Tie Plate Co. v. *Hamilton Steel and Iron Co.*, 8 Canadian Exch. Rep., 381.

Buckingham v. *Springfield Iron Co.*, 51 F. R., 236.

Marshall v. *Packard*, 51 F. R., 755.

Baldwin v. *Kresl*, 76 F. R., 825.

National Folding Box and Paper Co. v. *Stecher Lithographing Co.*, 77 F. R., 828.

Independent Die Co. v. *Savels*, 215 F. R., 122.

Weir v. *Morden*, 125 U. S., 98.

It is not necessary, however, to rely upon the doctrine of judicial notice or knowledge or to go into the question of what constitutes patentable invention, because, as will be hereafter shown, the record abounds with instances in which the upper surface both of tie plates and closely analogous devices were both grooved or channeled and ridged or flanged upon the top or rail supporting surface, and such construction is also abundantly shown in connection with both upper rail abutting side flanges and lower tie penetrating devices.

(b) Mere aggregation or non-patentable combination is shown in the Wolhaupter letters patent.

(1) *Failure to claim separate features.*

By failing to assert novelty in or to claim alone, as his invention, any one of the features of upper flanging or channeling, lower tie penetrating device, or upper rail abutting flanges, and in limiting the claims to tie plates, having a combination of either upper rail supporting flanges and lower tie penetrating devices (No. 538,809) upper rail flanges, lower tie penetrating devices parallel thereto and directly underneath (No. 691,332); upper rail bearing flanges, lower tie penetrating devices parallel therewith and directly underneath and upper rail abutting flanges (No. 691,332, third claim); or upper surface grooves or channels and upper rail abutting shoulders (No. 721,644), the patentee has absolutely conceded that each one of these elements or features was at the time of his application for Letters Patent embodying such combination claims, of itself and individually already known and in use and not his discovery, and has abandoned any claim to each of these features separately.

It is an undoubted rule that in construing the claims in Letters Patent, each element of the combination which

is not claimed as a distinctive and separate invention is concededly old. This rule results in the conclusion that each element of channeling or ridging, rail abutting shoulder and lower tie penetrating flanges in the Wolhaupter combinations is old and well known.

Corn Planter Patents, 23 Wall., 181, 224.
Rowell v. *Lindsay,* 113 U. S., 97, 101.
Merrill v. *Yoemans,* 94 U. S., 568, 573.
Water Meter Co. v. *Desper,* 101 U. S., 332.
Miller v. *Bross Co.,* 104 U. S., 350.
Richards v. *Chase El. Co.,* 159 U. S., 477, 486.
National News Board Co v. *Elkhart Co.,* 115 Fed. Rep., 328, 330.
Irwin v. *Hasselman,* 97 Fed. Rep., 964, 968.
Campbell v. *Conde Implement Co.,* 74 Fed. Rep., 745, 747.

This rule has been so uniformly and clearly enunciated and applied, that it does not need an analysis of or quotation from the cases. In the present instance it simply confirms what the record shows as to the existence and use of each one of these features in tie plates and analogous devices long prior to the issuance of the Letters Patent to Wolhaupter. The devices embodying all of these three features of rail shoulder flanges, upper rail supporting flanges, upper surface channels or grooves, and lower tie engaging projections or flanges will be referred to hereafter. The rule just referred to is invoked simply to show that the failure of the patentee to make the claim for any one of these features separately is a conclusive concession that each element by itself was old.

(2) *There is no correlated action or joint or new result or function from the aggregation.*

It is also evident upon the slightest consideration that rail abutting shoulders, ridged or channeled surface supporting the rail, and lower tie engaging projections have not the slightest correlation or interrelation in function or effect, and that to ridge or groove the rail bearing surface of a tie plate having a rail abutting shoulder and lower tie engaging projections or either produces no new or improved result or modifies the action or effect of the other elements by the addition.

Each feature, it is true, is a part of a mechanical device, but the existence or form of the rail abutting flange has no effect or correlative function on or in connection with the ridged or channeled upper surface. The first prevents lateral movement of the rail. The second simply supports the rail so far as the ridges or flanges are concerned and so far as the channels or grooves are concerned lightens the plate and allows the escape of foreign substances. Again, there is not the slightest combined or correlated action or function between the ridges or grooves upon the upper surface and the lower tie penetrating devices, nor is there any modified result or action by the combination of all three of these features in a tie plate. The rail abutting or shoulder flange prevents lateral movement in the rail on the plate in exactly the same way and to exactly the same extent whether the upper surface upon which the rail rests is ridged and grooved or flat, and the ridges under the rail support the rail in exactly the same way whether there is a rail abutting side shoulder or not. Likewise the ridges and grooves upon the upper surface do not in the slightest way modify nor are they in the slightest way affected by the presence or absence

of tie engaging projections upon the bottom. It might be said perhaps that the upper rail abutting shoulders and lower tie penetrating devices combine to prevent lateral movement of the rail, the upper shoulder by preventing side rail movement on the plate and the lower tie penetrating devices by preventing movement of the plate upon the tie, but even if this were conceded it would not in any way affect the issue, for there is no claim for a combination between the upper rail abutting shoulder and lower tie penetrating device without the intervention of the ridged or flanged rail supporting surface. Indeed the only claim of advantage from channelling is to lighten the plate and allow escape of water and sand and of ridges to lessen abrasion or wear.

These conclusions as to the utter lack of any combined or modifying function or result between the different elements or any new or better result from their *combination* in the manner formulated in the claims is abundantly supported by the testimony of the experts examined in the case. The expert for complainant conceded that the support of the rail on the corrugated surface and elimination of foreign substances between the rail and plate would not affect or modify the functions of the tie penetrating devices on the bottom, and that the function of the shoulder flange had no effect upon or in connection with the corrugations upon the top surface and that neither corrugations nor shoulder flange in any way affected the function of the other elements as parts of the tie plates. (John Howard McElroy, Rec., 117.)

Similar admissions were made by Benjamin Wolhaupter, patentee, in his examinations. (Rec., 322, 325, 329.)

Henry W. Carter, expert for defendants, declared that the tie engaging formation in the bottom projections and rail supporting corrugations or formation on the upper

surface, are devoid of any such co-operation, interdependence or interaction as is necessary to a legitimate combination. It is evident, therefore, that if each one of these features of tie plates had been shown, described or used, which is both proved and conceded by failure to claim separately, before the Letters Patent issued to Wolhaupter, as separate features of ties plates their joinder in a tie plate would not be such a combination as to be patentable but would be non-patentable aggregation.

See:

Hailes v. *Van Wormer,* 20 Wall., 353, 372.
Reckendorfer v. *Faber,* 92 U. S., 347, 355, 357.
Pickering v. *McCullough,* 104 U. S., 310, 317.
Slawson v. *Grand Street Ry. Co.,* 107 U. S., 649, 653.
Florsheim v. *Schilling,* 137 U. S., 64, 77.
Fond du Lac County v. *May,* 137 U. S., 395, 406.
Richards v. *Chase Elevator Co.,* 158 U. S., 299, 302; 159 U. S., 477, 485.
Office Specialty Mfg. Co. v. *Fenton Metallic Manf. Co.,* 174 U. S., 492, 497.
Campbell v. *Bailey,* 45 F. R., 564, 565.
Johnson Co. v. *Pacific Rolling Mills Co.,* 47 F. R., 586, 590.
Safety Car Heating & Lighting Co. v. *Consolidated Car Heating Co.,* 160 F. R., 476, 488.
Warner Instrument Co. v. *Stewart & Clark Mfg. Co.,* 185 F. R., 507, 510.

(3) *The lower court erroneously held patentable combination.*

The learned judge in his opinion below disposed of this question of patentable combination very peremptorily by saying that the result of the combined features was an

improved tie plate. The rule against mere aggregation, however, both in numerous applications and by express declaration applies not only to machinery but to manufactured articles which are not machines or active in their mechanical operation. Fireplaces, lead pencils and erasers, moulding crucibles, street car signal devices, street car collecting devices, stoves, double headed tacks, block pavements, ore stamp feeders, car doors and fastening devices, machines for treating raw hides, boots and shoes, corsets, jail doors, sole cutters, sole edge burnishers, lanterns, rectal mirrors, dress forms, grain elevators, book cases, railroad rails, cars, waste valves, transplanting machines, dredging machines, folding chairs, soda water apparatus, cabinets, railroad platforms, burners, furnaces, blank books, car heating appliances, regulators, type-block fasteners, thills, grab hooks, speed indicators and miners' lamps have been the subjects of the application of the rule. Indeed, the Circuit Court of Appeals, for the Seventh Circuit, in *Antisdel* v. *Chicago Hotel Co.*, 89 F. R., 30, expressly held that the rule excluding aggregations from patentable novelty applies to articles of manufacture as well as to mechanical appliances.

(c) The claims of the Wolhaupter letters patent are void because of anticipation.

(1) *The Wolhaupter patents and devices.*

The earliest Letters Patent sued on, No. 538,809, were based on application dated March 13, 1895, and were issued on May 7, 1895; the second Wolhaupter Letters Patent, No. 691,332, were applied for on May 3, 1897, and issued January 14, 1902; and the third Wolhaupter patent, No. 721,644, was applied for on March 31, 1902, and issued February 24, 1903.

The device shown and described in the first patent is a stepped or diagonal arrangement of the tie engaging flanges so arranged, it is claimed, as to get a new bite in the tie when use has worn the places in which the tie penetrating devices have been inserted. An upper rail abutting flange is both described in the specifications and shown in the drawings, and not made the basis of any claim either alone or in combination. The upper flanges and channels are parallel to the grain of the tie and at right angles to the rail, and the lower tie penetrating devices are parallel to the upper flanges and channels and engage m the tie parallel to its length. The upper rail abutting shoulder is made in effect by extending the edges or ends of the upper flanges above the rail supporting level. (See Figure 2, Exhibit "E" to petition.)

(2) *Prior devices shown in letters patent and publications.*

Prior to March 13, 1895, the following, among other Letters Patent for tie plates, or analogous devices, were issued from the Patent Office.

(1) *Hudson patent.*

Letters Patent to J. L. Hudson, No. 142,020, for railway joints, dated August 19, 1873. This shows a device inserted between the rail and the tie with a groove in its upper or rail supporting surface and shoulders at each side abutting the edges of the rail base, and preventing lateral rail movement on the plate. The plate also has a lower depending flange or rib either square or triangular in section for insertion in the tie. It is true that the Hudson device contemplated a rail with a lower longitudinal flange fitting into the upper groove, but it is perfectly obvious that this rail flange could be

readily omitted and the ordinary flat bottomed rail employed with all the elements of side rail abutting shoulders, upper rail bearing flanges (and an intermediate channel), and a lower tie engaging device without any modification of the chair itself. Indeed, the chair itself does not even suggest a rail flange.

The patent drawings are as follows:

Fig 1

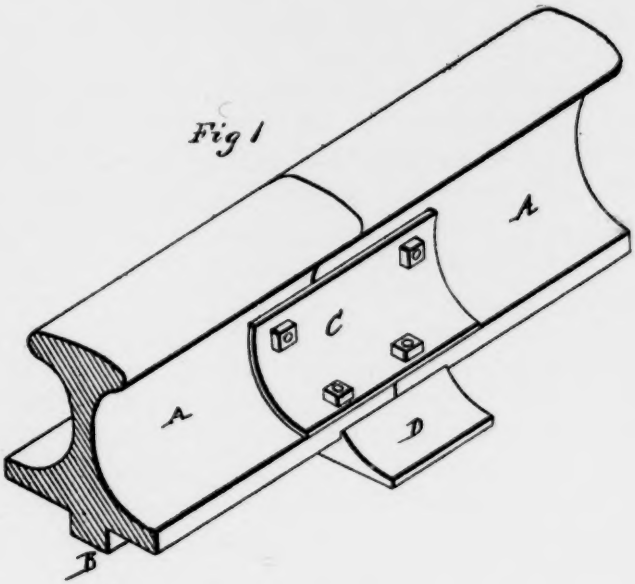
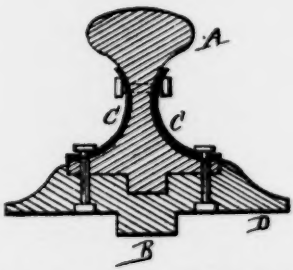


Fig 2



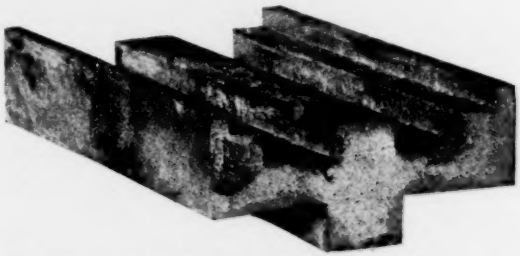
Device shown in letters patent No. 142,020, issued August 19, 1873, for Railway Rail Joints to J. L. Hudson. Specifications state that the bottom flange may be V in shape and the claim is for a grooved chair in combination with flanged rail. (Ex. S 67, Record Vol. III, pp. 1678-9.)

It will be noted that the rail abutting shoulders are

continuous and the rail supporting bearings and upper surface groove parallel to the rail and at right angles to the tie and the lower tie engaging flange crosswise of the grain of the tie and longitudinal to the rail, all exactly as in defendants' tie plate and so far as direction is concerned at right angles to the direction of the ridges, grooves and tie penetrating flanges of the first Wolhaupter Letters Patent.

(2) *Wells Patent.*

Letters Patent to Isaac Wells, No. 203,570, dated May 14, 1878. (Defendant's Exhibit "S 3," Rec., 1696-8.) This device and a number of other devices described and illustrated in prior Letters Patent were illustrated by aluminum models. No objection was made to any of these models as not correctly embodying the described and illustrated device except as hereinafter noted. A reproduction of a section of the aluminum model is as follows:



Reproduction of eight-inch cut from Aluminum Model (Ex. 06) showing Wells Rail Joint Device. Letters Patent No. 203,570, dated May 14, 1878, to I. Wells. (Rec., Vol. III, pp. 1696-8.) The grooves are stated to lighten the chair and to allow the escape of sand and grit.)

The device was intended as a railway joint for insertion under rails at their connection and reached over the space occupied by three ties. The device was for in-

sertion between rails and ties and served to hold the rails in place by preventing lateral movement and to protect the ties.

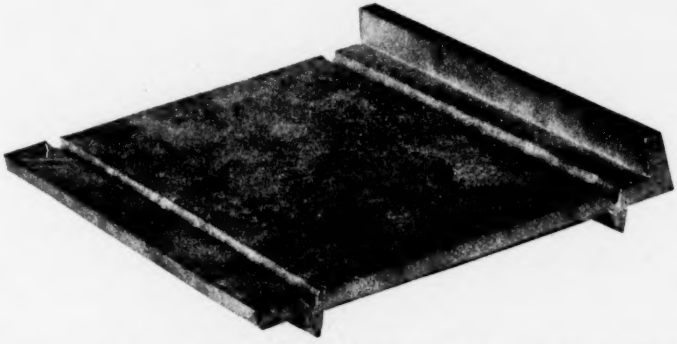
Railroad tie plates are made by rolling out long bars and then cutting off sections of the requisite lengths, say from six to eight inches, which are inserted on each tie. The Wells patent shows a device for holding rails in position upon ties, with each side extended upward so as to form two shoulders against which the sides of the rail base impinge, and an upper surface with two channels extending the entire length of the plate parallel to the rail, converting the upper or rail bearing surface into three ridges, two lateral and one central with two intermediate grooves, and with a lower tie engaging projection square in section adapted to be seated in the tie and prevent lateral movement. It is in the specifications stated that the raised outer flanges or shoulders prevent lateral motion of the rail; that the lower central rib prevents lateral displacement of the device and adds longitudinal rigidity to the chair itself, and that the grooves operate to separate the bearings (supporting the rail) and serve as receptacles for sand or grit that may enter between the chair and the rail insuring a firm bearing of the rail, and also enabling the chair to be made lighter and yet possess an equal amount of strength. (Rec., 1696-8.)

It is declared by both Mr. Edwin O. Faulkner (Rec., 467 and 468) and W. B. Storey, Jr. (Rec., 490 and 491), that a six-inch section of this rail chair would make a good and practical tie plate and it is also stated by Mr. Carter that it would so serve and that the language of the specification and claim almost literally describe the defendants' tie plate. (Henry W. Carter, Rec., 529 and 534.)

(3) *Gould Patent.*

Letters Patent issued June 26, 1883, to W. F. Gould, No. 280,030, for a railroad rail cushion and joint. (Exhibit "S6"; Rec., 1714-16.)

The aluminum model was as follows:



Reproduction of Aluminum Model (Ex. 020) of Railroad Rail Cushion and Joint shown in Letters Patent to W. F. Gould, No. 280030, dated June 26, 1883. (Exhibit S6, Record Vol. III, pp. 1714-6.)

This device, while styled a railroad rail cushion and used with additional devices, exhibits in this separate single part the form and all the functions of a tie plate. It has upon the upper surface a shoulder or flange parallel to the rail and against which the rail base abuts; two shallow, narrow grooves extend the entire length of the plate parallel to the shoulder and rail and divide the top of the plate into three rail bearing surfaces or flanges. Immediately below each one of the grooves on the bottom is a sharp wedge shaped rib for engaging crosswise in the tie. The specifications refer to these ribs as "beads" adapted to be pressed down and embodied in the top surface of wooden cross ties without removing any wood, and it is suggested that they may vary in configuration, size and

number, and that it is not essential that they should be "V" shaped and sharp edged, but should be sufficiently small and thin so as to be adapted to be sunk in the wood by the pressure of the locomotive as the construction train advances and the rails are laid. The longitudinal grooves or channels on the upper surface are plainly described and shown.

There were, it is true, corresponding ribs or beads upon the rail bottoms which fitted into the upper grooves, and it was suggested that there be a rubber cushion interposed between the rail bottom and plate, but in spite of these additional features the form of the plate or chair considered in and shown by itself is perfectly adapted for use as a tie plate under a flat bottom rail. And the plate was shown and claimed separately (claim 2, p. 1716) as a railway chair or plate illustrated by Fig. 2 having one or more longitudinal grooves in its top surface, and two or more distinct beads and shoulders on its under surface. It certainly exhibits, more than twelve years before the first application of Wolhaupter, a railway cushion or plate inserted between the rail and tie exhibiting (1) a shoulder parallel to the rail on the upper surface to prevent lateral movement of the rail; (2) two grooves extending clear across the plate parallel to the rail leaving three bearing surfaces for the rail to rest on; and (3) two projecting under side ribs parallel to the rail and adapted to penetrate the tie. A comparison of this railway cushion or plate with the device of defendants (Exhibit H to Petition) shows how closely analogous it is.

It does not matter whether there were additional elements such as the flanges or beads on the bottoms of the rails or intermediate rubber cushions as long as the device by itself is capable of use as a tie plate without the additional and suggested features on the rail. The plate

itself without any alteration is a good tie plate for any form of rail.

(4) *Dockstader Patent.*

Letters Patent to P. C. Dockstader, dated November 3, 1891, No. 462,399. This invention is styled "Lock Rail Joint" and was intended primarily for use at the junctures of rails, but that use involved insertion between the rails and the tie and its functions consisted in protection of the tie and keeping the rails in alignment. It certainly subserves the purpose of tie plates at the joints, and there is no reason why this device should not be just as effective when placed on ties intermediate between joints. A reproduction of the aluminum model is as follows:

Reproduction of Aluminum Model (Ex. O7) of Lock Rail Joint shown in Letters Patent to P. C. Dockstader, No. 462,399, dated November 3, 1891. (Exhibit S18, Record Vol. III, pp. 1812-18.)

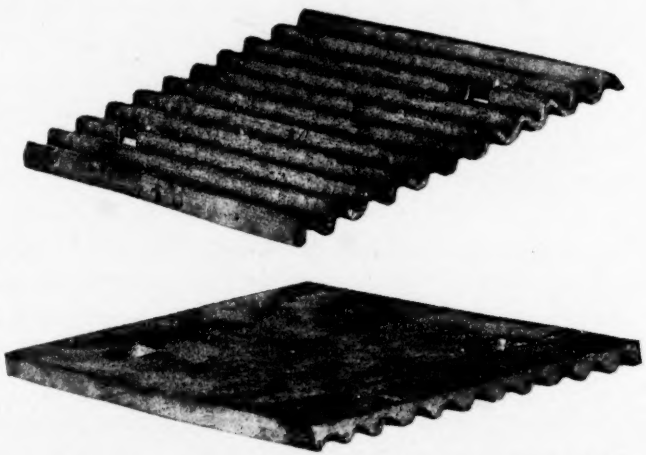
In the specifications the side flanges, upper surface groove and bearings and lower tie engaging projections are fully described (Exhibit "S18," Rec., 1815).

Here again are all the essentials of defendant's tie plates. The device has top shoulders parallel to the rail for preventing lateral rail movement; a depression or groove parallel to the rail extending across the plate leaving two side bearings upon which the rail rests. There are devices of various forms on the under side for engag-

ing in the tie under pressure and preventing movement of the plate on the tie. One of these forms of tie engaging projections is triangular, another in the form of a cross, and the third in the form of sharpened spurs or lugs projecting downward and engaging in the tie.

(5) *Dunham Patent.*

Letters patent to C. H. Dunham, February 23, 1892. This device is a very simple one and it is described and illustrated in two forms, one of which is simply a doubly corrugated plate with ridges and channels on both upper and lower surface parallel to the grain of the tie and at right angles to the rail and the other flat on top with corrugated bottom. Reproductions of the aluminum models are as follows:



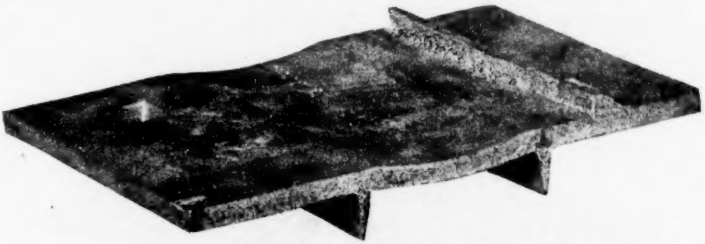
Reproductions of Aluminum Models (Ex. 08 and 09) of Railroad Tie Plate showing devices of Letters Patent, No. 469,386, dated February 23, 1892, to C. H. Dunham (Exhibit 819, Record Vol. III, pp. 1828-30).

The grooves and flanges on the upper and lower surface are not made by being cut or gouged out but simply

by bending the plate. The effect would not be, therefore, to lighten the plate, but it is evident that the upper surface channels would allow the escape of foreign substances, the upper ridges support the rail as bearings, and the lower ridges, especially those at the edge, to some extent press into the tie. There is no rail abutting side shoulder exhibited.

(6) *Goldie Patent.*

Letters patent to William Goldie, No. 485,030, dated October 25, 1892. The drawings and description of this device were embodied in the form of an aluminum exhibit, of which a reproduction follows:



Reproduction of Aluminum Model (Ex. 010) of Tie Plate showing device of Letters Patent, No. 485,030, dated October 25, 1892, to W. Goldie (Ex. S.22, Record Vol. III, pp. 1850-53). Plates of this form, known as Goldie Ribbed and Glendon Ribbed Tie Plates, made by Dilworth, Porter & Co. of Pittsburg, were made from 1891-1895 and supplied to about 50 Railroads, including the Atchison, Topeka & Santa Fe Railway Co. (Record, 1285-6, 1256-8, 640-41, 402-410.)

It is conceded that this aluminum model is a correct reproduction of the specifications and drawings of the letters patent. The description sets forth the cavity, rail bearing surfaces, rail abutting side shoulder and lower tie engaging ribs, and the drawings clearly illustrate the description.

(7) *Use of Goldie Tie Plate. This tie plate made and used by many railroads including the Santa Fe Railway Company from* 1892.

This device was manufactured for a period of some years by Dilworth, Porter & Co. of Pittsburg and supplied to and used by about fifty railroads, including the Atchison, Topeka and Santa Fe Railway Company. It was known as the Glendon Rib Tie Plate, and in 1892 about a thousand of these plates were purchased by the Atchison, Topeka and Santa Fe Railway Company, placed in track under flat bottomed rails, and remained over twelve years, giving so much satisfaction that an additional order was requested by the superintendent. These plates, after twelve years' use, were produced by defendants and offered in evidence, a reproduction of one of them being as follows:

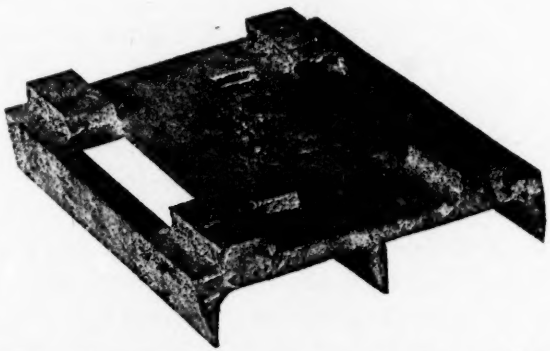
Top view of Goldie or Glendon Ribbed Tie Plate (Exhibit C) made by Dilworth, Porter & Co., 1,000 put in track by Santa Fe Railway Co. in 1892 and used for 14 years. Also supplied to 48 other railroads.

The original exhibit clearly shows the wear of the rail on the two side bearings and the depression below the rail. All this was so clearly established by the testimony that it is beyond dispute. It was urged that the cavity was not gouged or cut out but produced by bending down the inner surface. This, however, left two bearings which supported the rail and a continuous depression or cavity underneath the rail. Beyond any question the rail abutting side shoulder and also tie penetrating devices

parallel to and directly beneath the upper rail bearing surface are clearly shown. The Goldie tie plate as shown in the patent and made and used anticipates all these Wolhaupter claims and is almost *a fac simile* of defendants' plate. While the depression or channel on the upper surface was intended primarily to receive a rail with a rounded base or bottom, the patent clearly shows a space, even if a rounded rail were used, and existence of some intervening space in practical use was conceded by Goldie, the patentee, who testified for the complainant.

(8) *Reece Patent.*

Letters patent to B. Reece, No. 494,692, dated April 4, 1893. The aluminum model reproduction shows this form:



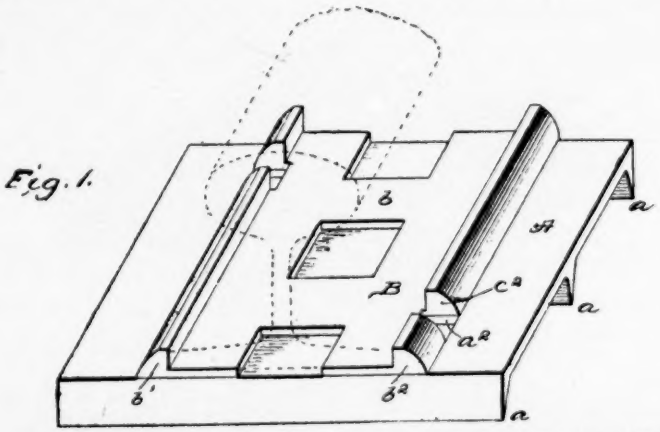
Reproduction of Aluminum Model (Exhibit O11) of Railroad Tie Plate shown in Letters Patent No. 494,692, issued April 4, 1893, to B. Reece. (Exhibit S25, Record Vol. III, pp. 1872-5.)

The upper surface shows three sections or flanges upon which the rail rests at right angles. The intermediate spaces go clear through the tie instead of only part way. There are side shoulders to prevent lateral movement of the rail and projecting and sharpened flanges on the un-

derside parallel to the grain of the wood and engaging in the tie. The result is a tie plate with an upper surface consisting of separate rail supporting bearings, intermediate channels, shoulder rail abutting flanges preventing lateral movement of the rail, and lower sharpened projections parallel to and beneath the rail bearing flanges engaging in the tie. Both upper spaces and bearings and lower tie engaging projections are parallel to the grain of the tie and at right angles to the wood.

(9) *Holmes Patent.*

The Letters Patent to W. W. Holmes No. 514,465 issued February 13th, 1894, for railway tie plates show a plate of the form following:

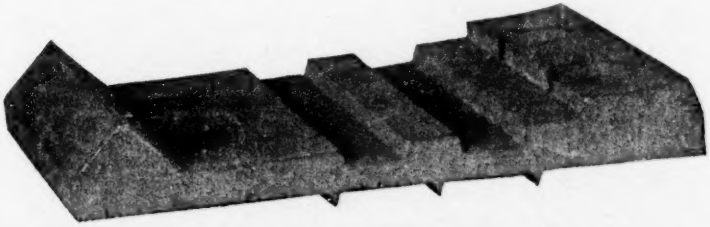


Reproduction of Fig. 1, from drawings in Letters Patent No. 514,465 issued February 13, 1894, to W. W. Holmes for Railway Tie Plates. (Exhibit S29, Record Vol. III, pp. 1896-8.)

This is a combination or double plate showing in effect a plate with rail abutting flanges, upper surface pockets and rail bearing flanges and lower tie engaging flanges.

(10) *Railway Gazette Device.*

In an article in the Railroad Gazette, published September 30, 1887, page 630 (Rec., 738, 739 and 1523) are shown and described devices employed for tie plates in various roads in Europe. The aluminum model illustrating one construction shown and described is as follows:



Reproduction of Aluminum Model (Ex. 024) of Figure 8 of devices shown in Railroad Gazette Vol. 19, p. 630, dated September 30, 1887. (Exhibit D. D. D. Record Vol. III, p. 1523.)

This shows a tie plate with a side shoulder against which the rail abuts, three bearings on the upper surface on which the rail rests and two intermediate grooves underneath the rail and also lower tie penetrating devices, parallel to and underneath the upper rail bearing flanges. Both the upper bearings and channels and lower tie penetrating devices are parallel to the rail and at right angles to the tie. The article itself states:

> "The groove shown in the upper surface was apparently adopted to lighten the plate, being taken out at a point where the metal was not needed."

It was insisted by counsel that this anticipation was distinguished by the fact that the grooves or channels on the upper surface were indicated by dotted lines, and therefore remain as pockets instead of complete transverse grooves. This is denied by the defendant's expert and asserted by complainant's expert. The device is in-

tended for a tie plate and is a close approximation of defendants' plate.

(11) *The German Publication.*

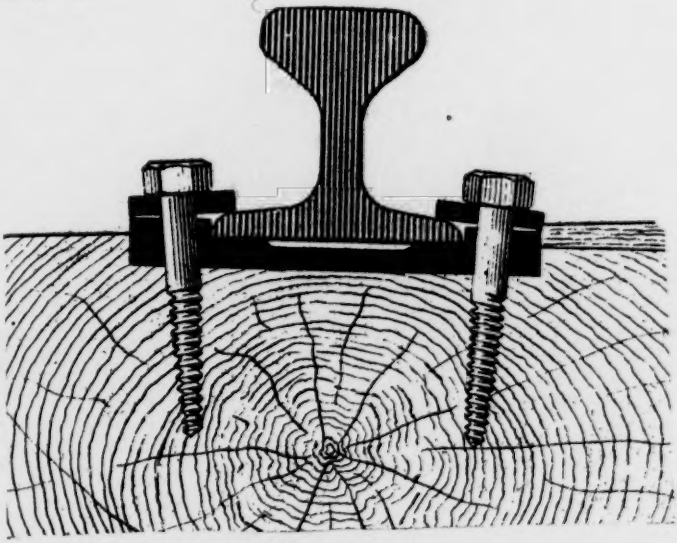
In a German publication of 1891 circulated in this country in 1892 various devices were shown for insertion between the tie and the rail to protect the former and keep the rail in position. Reproductions of these devices show the upper side shoulders, upper surface rail bearing ridges and intermediate groove or channel. It was insisted that here again the channel was a pocket instead of a complete transverse groove, but such is not the case in one instance at least. (Cut from page 635, Record Vol. III, 1527.)

Reproductions of Aluminum Models (Exs. 026 and 027) of cuts from Das Eisenbahn-Geleise, pages 661 and 662, published in 1891. (Defendant's Exhibit L. L. L. Record Vol. III, page 1531.)

Page 661.

Page 662.

Cut reproduced from Das Eisenbahn-Geleise, page 635, published in 1891. (Defendant's Exhibit K. K. K. Vol. III, p. 1527.)



Page 635.

There were no lower tie penetrating devices in any of these plates or chairs, but as anticipations of claims seven and nine of the last letters patent which they antidated about ten years, these forms cannot be disputed. Each shows rail abutting shoulders, upper surface rail bearings and an intermediate groove.

While these devices specifically referred to do not exhaust the record upon the question of anticipation, they are the most striking exhibitions and completely satisfied two lower courts and Court of Appeals of the Sixth Circuit both on the question of infringement and the latter on the question of novelty. And for a clear discussion of their application as anticipating devices reference is made to the opinion of the Circuit Court of Appeals of the Sixth Circuit (Exhibit C to Petition, 213 F. R.,

789). Each and all precede the first patent granted to Wolhaupter and as it ante-dated by seven or eight years the second and third patents of course are clearly applicable as anticipations of all Wolhaupter letters patent.

(12) *The Second and Third Patents in Suit.*

While there were some intermediate patents issued after the first letters patent to Wolhaupter and prior to the second and third, such as patents to Avery, No. 574,773, January 5, 1897; Charlton, No. 649,629, April 17, 1900, and Anderson, No. 700,714, May 20, 1902, it is not deemed necessary to discuss them at the present time. The Circuit Court of Appeals for the Seventh Circuit evidently exhausted itself in its discussion of anticipation in connection with the first Wolhaupter patent and, having found it to be invalid, concluded without any further investigation that the claims of the second and third were also valid. Keeping in mind all that has been shown in anticipation of the first Wolhaupter patent as also invalidating the second and third patents in issue, it is proposed to discuss the effect of the first Wolhaupter patent in suit and another Wolhaupter patent not sued on, in connection with the construction, scope and validity of the second and third Wolhaupter letters patent sued on.

(13) *The First Wolhaupter Patent as an Anticipation of the Second and Third Wolhaupter Patents in Suit.*

It will be noted that the first Wolhaupter Patent, No. 538,809, dated May 7, 1895, clearly showed (1) upper surface rail bearing flanges (2) upper surface channels or grooves (3) lower tie penetrating devices (4) a rail abutting upper flange produced in effect by the upward extension of the sides of the rail supporting flanges above the level of the rail supporting surface of those

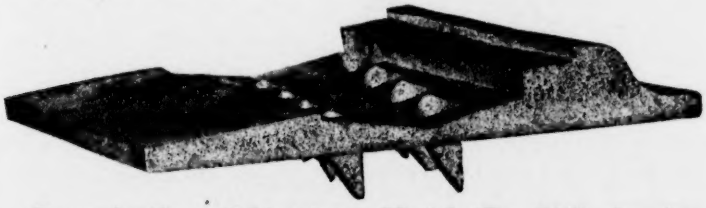
flanges. There can be no question as to the rail abutting side shoulder upon examination of figures 2 and 3. Moreover the language of the specification speaks of flanges on the top of the plate against which the rail flange can abut and the plate thereby be utilized to prevent the lateral movement of the rail and consequent widening of the gauge. Again it is said that "on the top side a way (c. 5) for the rail, or what may be termed a rail seat, is provided. This is clearly done by prolonging the upper flanges upward on each side of the rail. It is also the construction set out in claim six which is, however, extremely narrow and limited and not in anyway infringed by defendants' device. The result is that the first patent showed practically rail abutting shoulders, upper surface channels, upper surface flanges supporting the rails and lower tie penetrating devices. But claim eight covers under its broadest construction only a tie plate with devices on its lower side more or less sharpened and adapted to penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests. This is the only claim which is capable of broad construction or which can by any possibility cover defendants' construction. It is, therefore, under the rule above set forth a complete abandonment both of the side rail abutting shoulder and the upper surface channels either separately or in any combination with the other features.

Water Meter Co. v. *Desper*, 101 U. S., 332.

(14) *The Wolhaupter patent of* 1897 *as an anticipation of the second and third patents in suit.*

In addition Benjamin Wolhaupter on October 19, 1896, filed an application upon which on March 23, 1897 letters patent for railway tie plates No. 579,509, were issued. This was five years prior to the second and six years before the third Wolhaupter letters patent sued on. A re-

production of the aluminum model, which is conceded to correctly exemplify the drawings and specifications of the patent, is as follows:



Reproduction of Aluminum Model (Ex. O12) showing device of Letters Patent No. 579,509 issued March 23, 1897, to B. Wolhaupter for railway tie plates (Exhibit S49, Record Vol. III, pp. 2026-28.)

This patent, therefore, shows an upper side shoulder or flange, two side bearings upon which the rail base rests, an intermediate groove or channel extending between the rail supporting flanges and beneath the rail transversely from side to side of the plate and lower tie engaging projections in the form of rows of bent down triangular spikes. The seven claims of this patent are of the most narrow and technical description and not one of them attempts to cover either individually or in any combination either the upper side shoulder and intermediate transverse grooves or channels or the upper rail supporting flanges and lower tie penetrating devices. Of this Mr. Carter says that it is a complete disclosure of all the features of the second and third Wolhaupter patents. (Record, 564.)

This patent alone is therefore a complete abandonment by failure to claim either separately or in combination and by the exhibition of the same elements unclaimed as claims seven and nine of third letters patent to Wolhaupter which attempt to cover a tie plate exhibiting the side shoulder and an upper groove or chan-

nel transverse to the plate and extending completely across the same. It is also in effect an anticipation of claims one, two and three of the second Wolhaupter patent, although in these claims the tie penetrating devices are continuous and said to be placed parallel to and immediately beneath the upper rail bearing flanges. Surely placing the lower devices for entering the tie beneath the upper ridges or flanges instead of under the upper groove without any new result, is not invention capable of patent.

The lack of distinction between continuous ribs and rows of spurs or triangular pointed tie engaging devices is shown by the indifferent use of both or either of these in various patents such as the Goldie or Glendon Rib and the Goldie or Glendon Claw, known as Letters Patent No. 485,030, October 25, 1892; Goldie Letters Patent No. 540,356, date June 4, 1895, application filed January 17, 1894.

The first letters patent to Wolhaupter dated May 7, 1895, No. 538,809, and Wolhaupter Letters Patent No. 579,509, dated March 23, 1897 (now expired), are therefore in effect complete anticipations of the claims of the second and third Wolhaupter patents in suit, and by showing and failing to claim the features sought to be patented in the later applications, an abandonment of the elements and combinations thereof. The reason for this abandonment is clearly shown when the record anticipations are considered, whether the concession was made voluntarily or involuntarily, consciously or unconsciously. The prior disclosures of the elements not claimed is a demonstration of the futility of attempting to assert them in the first applications. The method pursued was to throw the Patent Office off its guard and then after years of silent concession come back with new applications.

(15) ***The lower court failed to consider adequately*** *the anticipations of the second and third Wolhaupter patents.*

None of these facts was considered or passed upon by the court below. That court took it for granted that its supposed demonstration of the validity of the first Wolhaupter patent was proof of the validity of all that followed. The assertion is ventured that this is the first instance in which a supposed inventor showing the same features of alleged invention has gone into the Patent Office on an extremely narrow and limited construction at first and has emerged upon the other applications ten years after with claims which are construed to be of a broad character.

(16) *All of the Wolhaupter patents are therefore void for want of novelty and patentable invention and there was no general public recognition, use and adoption of the Wolhaupter tie plates.*

(a) *Decisions as to anticipation.*

Keeping in mind that there is absolute presumption of knowledge of all prior letters patent and publications (*Duer* v. *Corbin,* 149 U. S., 216, 223); that railway joints, railway chairs and railway braces are devices analogous to tie plates within the meaning of the law because each is a device intermediate between the rail and the tie intended to keep the rail in place on the tie and protect the latter from wear, and so practically conceded by the testimony in the case (*Blake* v. *San Francisco,* 113 U. S., 679, 682, 683); that whatever infringes if later than the letters patent, anticipates if prior in time (*Grant* v. *Walter,* 148 U. S., 547, 553); that actual use of the devices described is not necessary, it is plain that the devices shown and described in the letters patent and in the publications are anticipations of all of the Wolhaupter

patents, and the claims of these patents are void for want of novelty and patentable invention.

See:

Smith v. *Nichols*, 21 Wallace, 112, 119.
Thatcher Heating Co. v. *Burtis*, 121 U. S., 286, 293, 294.
Stephenson v. *Brooklyn Ry. Co.*, 114 U. S., 149.
Weir v. *Morden*, 125 U. S., 98.
Watson v. *Cincinnati, Indianapolis & St. L. & Chi. Ry. Co.*, 132 U. S., 161, 167.
Burt v. *Evory*, 133 U. S., 349.
Florsheim v. *Schilling*, 137 U. S., 64, 77.
Fond du Lac County v. *May*, 137 U. S., 395, 406, 407.
Pope Mfg. Co. v. *Gormully Mfg. Co.*, 144 U. S., 238, 247.
Market Street Ry. Co. v. *Rowley*, 155 U. S., 621, 629.
Palmer v. *Corning*, 156 U. S., 342.
Voightman v. *Weiss & Ridge Cornice Co.* (C. C. A., 8th Cir.), 148 F. R., 848, 851.

(b) *Alleged public use.*

It is asserted that the Wolhaupter plates, that is, the devices shown and described in the Letters Patent, went into immediate public use and recognition and the rule of such public acknowledgment is invoked as decisive of the validity of the Letters Patent. Nothing could be further from the truth. As a matter of fact it is conceded that no tie plate embodying the forms shown and described in the three Letters Patent was ever manufactured either for use or as a sample, until the defendants in 1909 made the aluminum models used in this suit. Just in what form of the Wolhaupter patent was first actually made is not disclosed but we find on inspection

of complainant's catalogue that there was manufactured a device called "improved Wolhaupter." (See Rec., 1451.)

This was a plate without a rail abutting shoulder but with three top ridges, four top channels and four tie engaging projections, all transverse to the rail and parallel to the grain of the tie.

Afterwards came the new Wolhaupter, long flange Rec., 1453.) This was a slight modification of the last described plate, without top shoulder, and similar to the "improved Wolhaupter," excepting that the upper rail bearing flanges were broader, the channels or grooves on top harrower and the two inner of the four tie engaging projections shorter than the outside ones. It is quite similar to what is called the "Q. & W. plate" (Rec., 1455) now manufactured by complainant.

Then came what is described as the corrugated top shoulder tie plate. (Rec., 1465.) This is a plate with a top rail abutting shoulder, three rail supporting bearings or ridges and two channels, all parallel to the rail and crosswise to the grain of the tie. There are no lower tie engaging projections. This is what is known as the "Harriman Plate," and was gotten up by J. H. Wallace and J. D. Isaacs in 1904, as was a similar form probably by the Atchison, Topeka & Santa Fe Railway Co.'s engineers in 1904. It is not called a Wolhaupter plate even in complainant's catalogue and the style was never manufactured by complainant until after it had been devised by the railway engineers. Neither the Railroad Supply Co. nor Wolhaupter had anything to do with getting up this kind of plate. Then came the defendants' plate, which is practically the same plate as the one last described with two narrow beads or projections on the bottom for engaging in the tie, crosswise of the

grain of the tie and parallel to the rail. It is boldly styled in the record "complainant's tie plate," but the claim is simply assertion. It is really a modified "Harriman" plate not devised by Wolhaupter or complainant.

Intermediate between the "Improved Wolhaupter" and the "New Wolhaupter" possibly came the Wolhaupter shoulder flange tie plate. (Rec., 1475, 1477, 1479.) These plates are the same practically as the "Improved Wolhaupter" but with the addition of a side shoulder made by extending the upper rail bearing flanges on the outside above the plane of the rail base. Just at what time this Wolhaupter Shoulder Flange Tie Plate was manufactured we do not know. It is not true that the Wolhaupter tie plate in any form ever met with universal recognition and adoption. On the contrary it was condemned by many railroads that used it and a great many railroads absolutely refused to put it in track. In 1904, the Atchison, Topeka & Santa Fe Railway Co. and the Southern Pacific System were so dissatisfied with the Wolhaupter plates that after extended investigations, the Wolhaupter plates were abandoned and the "Harriman" plate and a plate of the same kind with lower tie engaging projections identical with the defendants' device were adopted. Faulkner, Isaacs and Wallace who were the experts chiefly concerned in this branch of railroad construction condemn the Wolhaupter plates saying that they were not satisfactory, did not perform the functions required and buckled and broke. Daniel Elliott and Charles Dyer, practical men, one the roadmaster and the other a division superintendent of the Santa Fe Road, condemned the Wolhaupter plates in use. (Rec., 409 and 641.) E. J. Steinbeck. assistant engineer of the Illinois Central Railroad, after some use of the Wolhaupter plate discarded the Wolhaupter because it was considered de-

structive to ties. (Rec., 698.) Joseph R. Haynes, assistant purchasing agent of the C., B. & Q. Railroad System, produced statistics showing that while the Wolhaupter plates were purchased in small quantities from 1896 to 1901 by his road, they were used in a very limited way and had practically been discarded. (Rec., 701.)

John M. McCarthy, purchasing agent of the Chicago, Rock Island & Pacific Railway System, testified that the standard on that system was a flat bottomed plate and not the Wolhaupter. (Rec., 718, 719.)

George L. Mansfield, mechanical engineer of the Chicago & Alton Road, testified that the Sellers' tie plate had been standard on that system for four years and that prior thereto after use of a few Wolhaupter, Glendon and Servis tie plates, they were abandoned; because the flanges were too thick and caused the ties to rot. (Rec., 721.)

Lester S. Carroll, purchasing agent of the Chicago & Northwestern Railway Co. showed that Wolhaupter plates had been used to a limited extent only on that System. (Rec., 723-726.)

L. R. Zollinger, Engineer of the Pennsylvania System, showed the forms in use and testified that that System (undoubtedly the greatest in the world) had never used the Wolhaupter tie plate. (Rec., 727.)

W. Hunter, Chief Engineer, of the Philadelphia & Reading Railroad System, showed that no Wolhaupter plates were in use on that Road and that the form employed was a flat top plate without projections on the bottom. (Rec., 729.)

W. L. Darling, engineer of the Northern Pacific Railway System, which system had used tie plates for 15 or 20 years, showed that the present standard was a flat

bottom, flat top, side shoulder plate, entirely distinct from the Wolhaupter form. (Rec., 729.)

W. A. Wallace, Engineer of the Monon Road, testified that after use in 1906, the Monon abandoned the Wolhaupter plates and took them out of track and substituted the Goldie plate because the Wolhaupter plates were not satisfactory. (Rec., 730.)

Benjamin T. Jellisson, of the Chesapeake & Ohio Co., testified that the standard on that system was a flat top, side shoulder plate with lower tie engaging ribs. It was not the Wolhaupter form. (Rec., 740.)

E. J. Powell, purchasing agent for the Chicago & Eastern Illinois Railway Co., testified that the standard plate of that Road, adopted in 1906, was a flat bottom, flat top, shoulder plate, much like the Sacramento plate. It certainly is not a Wolhaupter plate under any stretch of the imagination. (Rec., 740.)

A. W. Thompson, of the Baltimore & Ohio Railroad Company, stated that that system used Goldie plates, Sellers and McKee plates, also Wolhaupter, Glendon and Economy. Wolhaupter plate was used to a small extent only. (Rec., 741.)

By the testimony of the representatives and officers of Spencer Otis Company, Elyria Iron & Steel Company, Sellers Manufacturing Company and the Beaver Dam Malleable Iron Company and the catalogues produced, it appears that these companies are producing from ten to twenty thousand tons each per year of tie plates of forms varying from the Wolhaupter and are supplying such roads as the Lehigh Valley, Seaboard Air Line, Big Four, New York Central Lines, G. R. & I., Chicago, Rock Island & Pacific, Illinois Central, Chicago & Northwestern and Chicago, Burlington & Quincy Railroads therewith. (Rec., 655, 686, 708 and 720.)

Under this mass of testimony it cannot be claimed that the Wolhaupter plates met with general public recognition and use. That they were used to some extent is not doubted, but frequently their use was refused on many large systems before trial and after trial they were discarded in many others. This does not bring the case within the rule that public recognition is evidence of invention.

McClain v. *Ortmayer,* 141 U. S., 419, 428.
Adams v. *Bellaire Co.,* 141 U. S., 539, 542.
Manufacturing Co. v. *Cary,* 147 U. S., 623, 635.
Grant v. *Walter,* 148 U. S., 547, 556.
Duer v. *Corbin Cab. L. Co.,* 149 U. S., 216, 223.
Knapp v. *Morss,* 150 U. S., 221, 227.
Olin v. *Timken,* 155 U. S., 141, 155.

(c) *The lower court erred in finding general adoption and use of the Wolhaupter devices.*

The lower court ignored this testimony, which is a demonstration of the lack of utility of the Wolhaupter form shown in the letters patent, and found that there had been such universal recognition, adoption and use as to justify the theory of a valuable invention. This is exactly contrary to the facts. *No Wolhaupter device of the form shown in the letters patent was ever made for use.* Just in proportion as the forms made got away from those suggested, the use obtains. It was not until 1904 and after that when the Railroad Supply Company adopted the practical forms devised by the Atchison, Topeka & Santa Fe Railway Co. and Southern Pacific Co. experts and engineers and proceeded to manufacture, as it was free to do, and sell these forms, that the so-called Wolhaupter plate obtained any prominence or became of any value, but neither Wolhaupter nor the Railroad Supply Company had anything to do with getting up the practical forms.

Statistics were given (Rec., 1393) as to the quantity of Railroad Supply Company's plates sold in 1909. Of these out of the 44½ million plates sold, over 39 million were corrugated top plates, and about 5½ million were other than corrugated top plates, but in these statistics are included without distinction or discrimination the so-called Wolhaupter plates, the Harriman plates, the Q. & W. plates and plates like the defendants', and, therefore, the statistics are without value as demonstrating the use of the Wolhaupter plates. The other statistics showing the total tie plate manufacture of complainant, also include the Harriman plates and show that since 1904 over 20% of the sales of complainant have been of the so-called Harriman style. On the record (p. 62) and also set out in the opinion of the Circuit Court of Appeals of the Sixth Circuit is a tie plate practically identical with that of the defendants'. It is marked in the record and also in the opinion of Judge Sater, "Complainant's tie plate." It is not complainant's tie plate in the sense that it was gotten up by complainant or Wolhaupter. On the contrary it is a plate of the Southern Pacific Railroad Company devised by its engineers and modified by the engineers of the Santa Fe Railway Company and is in no sense the complainant's plate, except that it may, as it is free to do, manufacture plates of that kind, and has done so, since the form was gotten up by outside parties.

The rule, however, of commercial recognition does not apply where from the record it is plain that there is no invention. It is only in cases of doubt that public recognition and use are allowed to have weight in determining the final conclusion. But even if this were a case of doubt, the public use and recognition rule has no basis for application, because the forms shown in the patents were never made or used and the modified forms were put to use just in proportion as they receded from the

prescribed patented forms and the forms finally adopted and employed were not the result of the mentality either of Wolhaupter or of complainant or its employes.

(d) Defendants' tie plate does not infringe the Wolhaupter letters patent, if valid.

The tie plates shown, described and claimed in the Wolhaupter patents all have the bottom tie engaging projections at right angles to the rail and parallel to the grain of the tie, and the intention is in all to have these lower projections sharpened so as to deeply enter the tie. In the first two Wolhaupter patents the upper surfaces, ridges and channels are at right angles to the rail and parallel to the grain of the tie. In the third Wolhaupter patent the upper grooves are parallel to the rail. The first two Wolhaupter patents are not really plates, but devices of an arch and girder construction. Defendants' tie plate on the other hand is a plate in the proper sense of the term and the upper shoulder, upper ridges and channels and lower tie engaging projections are all parallel to the rail and at right angles to the tie and are modifications or changes on the surfaces of the plate only. Comparing the drawings in the Wolhaupter patents, as shown in the exhibits to the petition and defendants' device, it is a conservative statement to say that the differences are more striking than the differences between the anticipating structures to which attention has been called and the Wolhaupter device. There is a close structural and functional resemblance between the Hudson, Wells, Gould, Dockstader, Goldie and Railway Gazette devices and defendants' device. A comparison of the illustrations demonstrates this more clearly than any amount of description can do. The result is that any argument to establish the defendants' tie plate as an infringement of any of the Wolhaupter patents becomes a

demonstration of the invalidity of those patents because of anticipation by the prior devices. That is practically the entire case. If the claims are valid they are not infringed, and if the defendants' tie plate is an infringement then the claims are devoid of novelty and patentable invention and invalid.

(a) *No room for broad invention in* 1895.

It is perfectly evident that when Wolhaupter made application for the letters patent on March 13, 1895, there was but little room for patentable invention in connection with tie plates. Rail abutting shoulders, corrugated, ridged and grooved upper surfaces and also tie engaging projections had been used upon tie plates both separately and in all combinations. This was recognized throughout by Wolhaupter in his specifications and claims in all his letters patent and must be the construction given, if any validity is to be accorded.

The reasoning of Judge Kohlsaat, approved by Judge Day and the Circuit Court of Appeals of the Sixth Circuit is so satisfactory that but little more need be said:

> "If the first Wolhaupter letters patent should be held valid as to the claim sued on (Rec., 17, 21) this claim must of necessity be limited to the specific device shown, and it is plain that there is no infringement and can be none. Defendants' device is simply a flat tie-plate with shoulder, grooved and ridged upper surface and lower projecting beads or ridges for engaging in the tie crosswise. (Rec., 33.) Each element of shoulder, ridges and lower ribs is parallel to the rail and at right angles to the tie. There is no staggered or arched construction. On the contrary, the specific device of the first letters patent shows an arched construction, with the upper and lower flanges parallel to the tie and at right angles to the rail.
>
> The claims in the second letters patent (Rec., 23, 25), when limited to the specific devices therein claimed cannot be said to cover defendant's tie-

plate. Here again the construction or arrangement of the flanges, upper and lower, is parallel to the grain of the tie and at right angles to the rail, while defendant's device is the reverse.

The arrangement, however, of the upper surface elements (Rec., 27, 28 and 32) in the last letters patent of Wolhaupter and in the defendants' tie-plate is the same. The rail shoulder is parallel to the rail in both and the grooves in the upper surface of some of the devices shown in the patent are also parallel to the rail, as are also the grooves in defendants' tie-plate. But the lower tie engaging flanges are sharpened, parallel to the tie grain and thus make a construction variant from the Storey plate. And the claims are so plainly devoid of patentable novelty as to make any claim of infringement almost an absurdity."

(b) *Construction of the Letters Patent.*

In the first two letters patent, each claim closes with the words "substantially as described." Authorities differ but the logical and potential decisions are to the effect that such language confines the claim to the specific device mentioned in the specifications, and this is unquestionably the rule where the invention is not primary in character.

See:

Paul Boynton Co. v. *Morris Chute Co.*, 87 F. R., 225, 227.

McLain v. *Ortmayer*, 141 U. S., 419, 424.

White v. *Dunbar*, 119 U. S., 47.

Hobbs v. *Beach*, 180 U. S., 399, 400.

Westinghouse v. *Boyden Co.*, 170 U. S., 537, 558.

Knapp v. *Morss*, 150 U. S., 221.

Denning Wire Co. v. *American Steel & Wire Co.*, 169 F. R., 793, 800.

General Comp. Air, etc., Co. v. *Am. Air Cleaning Co.*, 177 F. R., 272, 275.

Am. Bank Co. v. *City N. B. Co.*, 181 F. R., 375, 378.

(c) *Decisions on non-infringement.*

Many of the cases cited on the question of novelty also hold that if validity existed, the narrow scope of the letters patent excluded infringement and but few cases need be added.

See *Knapp* v. *Morss,* 150 U. S., 221.

It was said (p. 228):

> "If, however, the patent could be sustained at all, it would have to be restricted and confined to the specific combination described in the second claim as indicated by the letters of reference in the drawings, and each element specifically pointed out is an essential part thereof. *Duff* v. *Sterling Pump Co.,* 107 U. S., 636, 639; *Newton* v. *Furst & Bradley Co.,* 119 U. S., 373; *Bragg* v. *Fitch,* 121 U. S., 478; *Crawford* v. *Heysinger,* 123 U. S., 589; *Dryfoos* v. *Wiese,* 124 U. S., 32.
>
> For if not so restricted by the letters of reference the effect would be to make the claims co-extensive with what was rejected in the Patent Office.
>
> If any validity could be conceded to the patent, the limitation and restriction which would have to be placed upon it by the action of the Patent Office, and in view of the prior art, would narrow the claim, or confine it to the specific structure therein described, and as thus narrowed there could be no infringement on the part of appellants if a single element of the patentee's combination is left out of the appellant's device. *Sargent* v. *Hall Safe & Lock Co.,* 114 U. S., 63; *Eddy* v. *Dennis,* 95 U. S., 560; *McCormick* v. *Talcott,* 20 How., 402."

See:

Kokomo Fence Co. v. *Keithman,* 189 U. S., 8, 23.
Frank v. *Mockridge Manf. Co.,* 65 F. R., 521.
Irvington Co. v. *Utica Co.,* 191 F. R., 169.

This case presents therefore two fundamental questions: First, as to the effect which should be given to the decision of the Circuit Court of Appeals for the

Sixth Circuit as a final decision binding upon all the parties to both suits.

The embarrassment, confusion, uncertainty and the injustice that must inevitably result from enforcement of the decision of the Seventh Circuit Court present a most cogent argument in favor of the contention that the decision of the Sixth Circuit was *res judicata* on all the parties in both suit.

The other question includes the construction, scope and validity of the letters patent sued on. The opinion of the Sixth Circuit disclosed a very thorough and careful consideration of the record and analysis of the evidence. The opinion in the Seventh Circuit Court (with all due respect) does not exhibit such study of the case, but rather jumps at conclusions. Especially is this the case in regard to the validity of the second and third letters patent. There is no discussion whatever on this subject, but it is assumed as a logical sequence that if the first patent is valid, the second and third are also. It has been attempted to show that the contrary conclusion should obtain.

It is therefore submitted that the writ should be granted, the case reviewed by this court and the decision and decree of the Circuit Court of Appeals for the Seventh Circuit reversed.

Respectfully submitted,

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Gen. No. 24,569. **Calendar No. 67.**

THE HART STEEL COMPANY AND GUILFORD S. WOOD,
Petitioners,

vs.

THE RAILROAD SUPPLY COMPANY,
Respondents.

WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SEVENTH CIRCUIT.

Gen. No. 24,647. **Calendar No. 95.**

RAILROAD SUPPLY COMPANY,
Petitioner,

vs.

ELYRIA IRON & STEEL COMPANY,
Respondent.

WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SIXTH CIRCUIT.

BRIEF AND ARGUMENT FOR PETITIONERS, HART STEEL COMPANY AND GUILFORD S. WOOD AND RESPONDENT ELYRIA IRON & STEEL COMPANY.

FRANK F. REED and
EDWARD S. ROGERS,
Solicitors for said Petitioners.

FREDERICK P. FISH,
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SHUTTUCK-HAGGIN PRINTING COMPANY, CHICAGO.

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IN THE

Supreme Court of the United States

OCTOBER TERM, A. D. 1916.

Gen. No. 24,569. Calendar No. 67.

THE HART STEEL COMPANY AND GUILFORD S. WOOD,
Petitioners,

vs.

THE RAILROAD SUPPLY COMPANY,
Respondents.

WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SEVENTH CIRCUIT.

Gen. No. 24,647. Calendar No. 95.

RAILROAD SUPPLY COMPANY,
Petitioner,

vs.

ELYRIA IRON & STEEL COMPANY,
Respondent.

WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SIXTH CIRCUIT.

BRIEF AND ARGUMENT FOR PETITIONERS IN NO. 24569 AND ALSO FOR RESPONDENT IN NO. 24647.

I.

STATEMENT OF THE CASE.

This case and that of Railroad Supply Company, petitioner, *vs.* Elyria Iron and Steel Company, respondent,

Gen. No. 24647, Cal. No. 95, are to be heard together on the record and briefs herein.

On December 9, 1908, The Railroad Supply Company, respondent, instituted in the Circuit Court of the United States, for the Northern District of Illinois, a suit against The Hart Steel Company and Guilford S. Wood, petitioners, alleging infringement of certain claims of three letters patent for railway tie plates by reason of the sale of five thousand tons of tie plates made by the Elyria Iron and Steel Company and sold by its sales agent, The Hart Steel Company (Guilford S. Wood, Manager), to the Atchison, Topeka and Santa Fe Railway Company. These tie plates were installed and used by the Railway Company in its tracks at various points.

On March 26, 1909, a similar suit was brought by The Railroad Supply Company, respondent, in the Circuit Court of the United States, for the Northern District of Ohio, Eastern Division, against the Elyria Iron and Steel Company, manufacturer, for alleged infringement of the same claims of the same letters patent by reason of the manufacture and sale of the same five thousand tons of railway tie plates sold to the same Railway Company by the petitioner, The Hart Steel Company, as sales agent of the manufacturer, and which sale was the basis of the first named suit against petitioners.

The two bills of complaint were practically identical (Printed Record, Vol. I, pp. 2-22; Vol. III, p. 1042), except as to parties defendant, and in basing the action in the first case on the *sale*, and in the second case on the *manufacture and sale* of the same lot of tie plates. Answers identical, except as to names of defendants, were filed in both cases, denying infringement, alleging invalidity of the letters patent, and claims asserted to be infringed, for lack of novelty and patentable invention and lack of patentable combination. (P. R., Vol. I, pp. 23-30, 31-33.)

The evidence was taken in the first suit and, by stipulation, a carbon duplicate, with only the names of the courts and of the defendants changed, was filed in the second suit, and the same exhibits used. The two records are, except as to formalities, identical in both cases.

The bill of complaint in the Seventh Circuit suit, after elaborate argument and briefs, was dismissed for want of equity by the Honorable Christian C. Kohlsaat on December 18, 1911, who held that if the claims alleged to be infringed were given a broad construction, they would be void for want of novelty; and if given the limited construction necessitated by the state of the art and prior used, described and patented devices, there was no infringement by the tie plates sold by the defendants. The case is reported as *The Railroad Supply Company* v. *The Hart Steel Company et al.*, 193 Fed., 418, and a copy of the opinion is attached hereto as Exhibit I.

On March 4, 1912, the suit against the Elyria Iron and Steel Company (maker) in the Sixth Circuit, after argument and consideration, was dismissed by the Honorable William L. Day for want of equity upon substantially the same grounds as set forth in the opinion of Judge Kohlsaat. A copy of the opinion of Judge Day is attached hereto as Exhibit II.

Appeals were taken by The Railroad Supply Company, respondent, in both cases, and on April 7, 1914, the Circuit Court of Appeals for the Sixth Circuit, after due argument and consideration, affirmed the decree of dismissal, adopting with approval the views of Judges Day and Kohlsaat as to non-infringement, and in addition holding and adjudging each and all of the claims in the letters patent alleged to be infringed null and void for lack of patentable novelty and invention. The decision is reported as *The Railroad Supply Company* v.

Elyria Iron and Steel Co., 213 Fed., 789, a copy of the opinion is set out in the record herein (P. R., Vol. III, pp. 1387-1397), and for convenience an additional copy is annexed hereto as Exhibit III.

After overruling a petition for rehearing, the mandate of the Sixth Circuit Court of Appeals was duly filed in the court below, and on July 20, 1914, a final order and decree entered therein, affirming the decree of dismissal of March 4, 1912, and directing the judgment of the Circuit Court of Appeals to be entered as the judgment of the lower court and awarding costs to defendant. (P. R., Vol. III, p. 1404.)

On October 6, 1914, the first day of the ensuing term of the Circuit Court of Appeals of the Seventh Circuit, in which the appeal from the decision of Judge Kohlsaat was still pending and undetermined, petitioners herein made a motion for affirmance of the decision of Judge Kohlsaat on the ground of *res judicata,* basing the motion upon certified copies of the final decrees of the courts in the Sixth Circuit, identity of subject matter and records, and asserted privity between the parties. This motion was overruled. (P. R., Vol. III, pp. 1383-1406, 1405, 1406.)

Thereafter, on November 10, 1914, the appeal pending in the Seventh Circuit Court of Appeals was duly argued and submitted, and on January 5, 1915, the court reversed the decision of Judge Kohlsaat, holding the claims in question of all three letters patent valid and infringed by the device of defendants. (Opinion, reported as *Railroad Supply Company* v. *Hart Steel Company et al.,* 222 Fed., 261, incorporated in the record herein (P. R., Vol. III, pp. 1408-1424), and for convenience copy attached hereto as Exhibit IV.)

Thereupon petitioners, on February 20, 1915, filed a

petition for a writ of certiorari herein, which was allowed on March 16, 1915. (P. R., Vol. III, p. 1430.)

Subsequently, a petition for writ of certiorari from the decision of the Sixth Circuit was filed in this court on April 5, 1915, and allowed April 12, 1915, and by stipulation the two cases are practically consolidated and, as the records are identical, are to be heard and decided upon the same printed record and briefs.

The litigation is based upon alleged infringement of certain claims of letters patent issued to Benjamin Wolhaupter, namely, claim eight of Letters Patent, numbered 538,809, dated May 7, 1895, for improvement in tie plates, and claiming a railway tie plate formed on its under side with devices more or less sharpened, adapted to penetrate and engage the tie and on its upper surface with a series of flanges on which the rail rests. (P. R., Vol. I, pp. 11-14.)

Of claims one, two and three of letters patent for railway tie plates, numbered 691,332, dated January 14, 1902, for (1) a railway tie plate provided on its upper side with one or more flanges on which the rail may rest or by which it is directly sustained and on the under side with one or more tie engaging flanges extending parallel to and directly beneath the upper flanges; (2) provided with such upper and lower flanges so arranged and the latter sharpened to permit them to readily enter the tie; and (3) for the same combination of upper flanges and lower parallel sharpened tie engaging flanges with an upper side rail abutting flange, substantially as described. (P. R., Vol. I, pp. 15-17.)

Also of claims seven and nine of letters patent, numbered 721,644, dated February 24, 1903, for improvements in tie plates for (7) a tie plate provided in its rail supporting surface with transverse grooves or channels and

at one margin of said supporting surface with a transverse rail abutting shoulder, and (9) the same upper shoulder and grooves with the grooves reaching to the edge of the plate. (P. R., Vol. I, pp. 18-21.) The alleged infringing device was shown by a physical exhibit (Complainant's Exhibit No. 15) (P. R., Vol. I, pp. 46, 47, 64, 65, defendant's infringing tie plate), and by photographic reproductions thereof. (Petition, Exhibit "H," p. 85; P. R., Vol. I, p. 22.)

Railway tie plates are metallic plates placed on railroad ties beneath the rails to lessen wear and abrasion of the tie, sustain the rail and prevent lateral rail movement, and are now used in one form or another by practically all the railroads and the use thereof, beginning practically about 1890, was bound to increase, and has constantly increased because of the added weight of rails and rolling stock, increased speed of trains and the difficulty of procuring hardwood railway ties. (P. R., Vol. I, pp. 58, 162, 163, 308, 310, 344, 554, 567, 568-571.)

The Hart Steel Company (petitioner), of which Guilford S. Wood (co-petitioner) is the local manager in Chicago, is the sales agent or selling department of the Elyria Iron and Steel Company. All its capital stock is owned by the Elyria Iron and Steel Company and the two companies have identical officers. The privity of common officers, exclusive stock owning and sales agency, both generally and in the actual sales of the alleged infringing device, is undisputed. (P. R., Vol. III, pp. 1397-1401.)

Prior to the manufacture by the Elyria Iron and Steel Company for, and the sale through The Hart Steel Company, its selling agent, to the Atchison, Topeka & Santa Fe Railway Company, that company guaranteed both the Elyria Iron and Steel Company and The Hart Steel

Company protection against any loss, by reason of such manufacture and sale, from infringement of letters patent and subsequently employed counsel and conducted the defense of both suits and plaintiff knew all these facts. (P. R., Vol. II, pp. 833, 853, 854 and III, 1399.)

II.

ASSIGNMENTS OF ERROR.

The assignments of error relied on by petitioners are: Error in the decree of the Circuit Court of Appeals for the Seventh Circuit in sustaining and holding valid the specified claims of the three Wolhaupter letters patent; in refusing to hold and not holding each of said claims invalid and void for want of patentable combination and for want of invention and patentable novelty; in holding the device of defendants an infringement of any and all of such claims; in not affirming the decree of the Circuit Court; in directing an accounting for the alleged infringement of the eighth claim of the first named letters patent (these had expired pending the appeal); in directing an injunction based upon and an accounting for the alleged infringement of the claims specified of the second and third Wolhaupter letters patent; in reversing said decree of the Circuit Court of the United States dismissing the suit for want of equity; in not granting, and in denying and overruling the motion of petitioners made October 6, 1914, to affirm the decree of the lower court on the ground of *res judicata;* and in directing a decree against petitioner for costs of suit. (P. R., Vol. III, p. 1429.) These errors assigned may be summarized into (1) refusing to hold the prior final decisions of the Sixth Circuit binding and final as *res judicata* in the Seventh Circuit suit and so affirming

the dismissal decree of the Circuit Court; and (2) declining to hold the Wolhaupter letters patent claims in suit either void for want of patentable combination or want of novelty and invention, or not infringed.

III.

RES ADJUDICATA.

The Seventh Circuit Court of Appeals should have held the decrees of the Sixth Circuit Courts final, res judicata and binding on the parties herein and affirmed the decision of the lower court instead of overruling the motion to affirm and considering the merits of the litigation.

The decision of the Circuit Court of Appeals for the Sixth Circuit in *Railroad Supply Company* v. *Elyria Iron and Steel Company* (the manufacturer), was announced April 7, 1914. The mandate was filed and final decree entered in the District Court July 20, 1914. The Seventh Circuit Court of Appeals was not then in session, but on the first day of its next session (October 6, 1914, the first opportunity), petitioners presented their motion to the Circuit Court of Appeals for the Seventh Circuit for affirmance of the decree of the lower court on the ground that the Sixth Circuit decision was *res judicata* because of identity of subject matter and evidence, and identity and privity of parties. The motion was, however, overruled, the cause considered on its merits, and a conclusion wholly variant from that of the Sixth Circuit reached. (P. R., Vol. III, pp. 1386-1406.)

The two suits related to the same claims in the same three Wolhaupter letters patent and alleged infringement thereof by the same manufacture and sale by the Elyria Iron and Steel Company, through the medium of the Hart Steel Company, its selling agent, to the Atchison,

Topeka & Santa Fe Railway Company (P. R., pp. 45, 46, 1400, 1401) of five thousand tons of tie plates identical with Exhibit "D" to the bill of complaint. (P. R., Vol. I, pp. 22, 46; Vol. III, pp. 1398, 1400.) The same defences were set up in both cases, and thus the pleadings, evidence, issues and decisions of the two courts related to subject matter that was identical. (See *Railroad Supply Co.* v. *Hart Steel Co.*, 193 Fed., 418, and *Railroad Supply Co.* v. *Elyria Iron & Steel Co.*, 213 Fed., 789, Exhibits I and III hereto.) The Elyria Iron and Steel Company manufactured the five thousand tie plates. The Hart Steel Company is the selling organization of the Elyria Iron and Steel Company and its stock is all owned by the Elyria Iron and Steel Company. W. S. Miller is the president of both corporations. (P. R., Vol. I, pp. 487, 488; Vol. II, p. 839; Vol. III, p. 1398.) The Atchison, Topeka & Santa Fe Railway Company, in ordering and purchasing the five thousand tons of tie plates from the Elyria Iron and Steel Company, through The Hart Steel Company as selling agent, guaranteed both companies against loss by reason of patent infringement. (P. R., Vol. II, p. 853, 854; Vol. III, p. 1399.) The Atchison, Topeka & Santa Fe Railway Company has had practical control and charge of the suits, and employed and paid the counsel for all defendants. (P. R., Vol. II, p. 854; Vol. III, p. 1399.) The complainant and its counsel were well aware of both the guaranty and defence by the railway company and made proof of these facts. (P. R., Vol. I, p. 227, 228, 295, 326, 439, 497; Vol. II, pp. 851-853, 854; Vol. III, p. 1399.) The two suits were, therefore, not only identical in pleadings, proofs, issues, evidence and subject matter, but in both, The Railroad Supply Company, owner of the letters patent litigated, was plaintiff; the manufacturer of the device claimed to infringe was the party defend-

ant in the Sixth Circuit litigation; the manufacturer's selling agent, a corporation of which the manufacturer owned all the stock and with which it had common officers, was a defendant in the Seventh Circuit; and the railway company, purchaser and user of the same lot of alleged infringing tie plates and guarantor of both manufacturer and selling agent against loss by patent infringement, conducted the defence of both cases. The adjudications in the Sixth Circuit were made, during the pendency of the appeal in the Seventh Circuit suit, and were final months prior to the argument, submission or decision in the Seventh Circuit, and the attention of that court was called to this situation in proper form at the very first opportunity after the final decrees were entered and the adjudicated condition existed.

This was the proper procedure. Indeed, when the estoppel of *res judicata* arises too late for pleading, the judgment may be offered in evidence without any pleading with the same effect as though pleaded.

Sheldon v. *Patterson*, 55 Ill., 507, 512.

It was, therefore, the duty of the Seventh Circuit Court of Appeals to enter, upon motion of appellee, the required order affirming the decision of Judge Kohlsaat on the ground of *res judicata*, and final disposition of the subject matter by the prior final decrees in the Sixth Circuit, binding on all the litigants before both courts. While the parties defendant in both cases were not identical in name, there existed the necessary privity by reason of agency, entire stock ownership in, and control of the manufacturer over its agent, and the conduct by the railway company of the defenses in both suits. Complainant knew all these facts, and the requisite mutuality

and privity to establish estoppel and *res judicata* existed.

Kessler v. *Eldred*, 206 U. S., 285.

Brill v. *Wash. Ry. & Elec. Co.*, 215 U. S., 527, 529.

Rubber Tire Wheel Co. v. *Goodyear Tire & Rubber Co.*, 232 U. S., 413, 417.

(1) The relation of The Hart Steel Company, as selling agent, to the Elyria Iron and Steel Company, both generally and in the actual sale of the five thousand tons of tie plates, made an adjudication in favor of its principal an estoppel against the further maintenance of a suit on the same cause of action against it as agent.

Lea v. *Deakin*, 15 F. C., 8154.

Warren Featherbone Co. v. *De Camp*, 154 Fed., 198, 199.

David Bradley Mfg. Co. v. *Eagle Mfg. Co.* (6 C. C. A., 661), 57 Fed., 980, 985.

United States v. *United Shoe Machinery Co.*, 234 Fed., 127, 141-143.

(2) The entire stock ownership in, community of officers and unquestioned control of the Elyria Iron and Steel Company over The Hart Steel Company also established a sufficient bond of privity to make the Sixth Circuit final decision a binding adjudication on all parties.

U. S. v. *Lehigh Valley Rd. Co.*, 220 U. S., 257, 273.

U. S. v. *Delaware, Lackawanna & Western Rd. Co.*, 238 U. S., 516, 529.

Dana v. *Morgan*, 219 Fed., 313, 316; 232 Fed., 85, 89.

Hunter v. *Baker Co.*, 225 Fed., 1006, 1016.

(3) The Railway Company, as purchaser, user and guarantor, was sufficiently in privity with the Elyria Iron and Steel Company to invoke the doctrine of *res judicata.*

Kessler v. *Eldred,* 206 U. S., 285.

Hurd v. *Seim,* 191 Fed., 832, 833.

Rubber Tire Wheel Co. v. *Goodyear Tire & Rubber Co.,* 232 U. S., 413, 417.

W. A. Gaines Co. v. *Rock Spring Distilling Co.,* (141 C. C. A., 287); 226 Fed., 531, 537.

(4) The assumption and conduct of the defence in each case, known to complainant, practically made the Railway Company a common defendant, and the first decision was binding both upon it and the complainant as to the common subject matter of both suits.

LaCroix v. *Lyons,* 33 Fed., 437, 439.

Empire State Nail Co. v. *Am. Solid Leather Button Co.,* 71 Fed., 588, 589.

Cramer v. *Singer Mfg. Co.* (35 C. C. A., 508), 93 Fed., 636, 637.

Lane v. *Welds* (39 C. C. A., 528), 99 Fed., 286, 289.

Penfield v. *Potts & Co.* (61 C. C. A., 371), 126 Fed., 475, 479.

Sacks v. *Kupferle,* 127 Fed., 569, 571.

Brill v. *Peckham Mfg. Co.* (68 C. C. A., 486), 135 Fed., 784.

D'Arcy v. *Staples & Hanford Co.* (88 C. C. A., 606), 161 Fed., 733, 735.

Marshall v. *Bryant Elec. Co.* (107 C. C. A., 599), 185 Fed., 499, 502.

Cushman v. *Warren-Scharf Asphalt Pav. Co.* (135 C. C. A., 289), 220 Fed., 857, 860.

Gilchrist Co. v. *Erie Specialty Co.* (C. C. A.), 231 Fed., 659, 662.

Brill v. *Wash. Ry. & Elec. Co.*, 215 U. S., 527, 529.
Souffront v. *LaCompagnie, etc., De Porto Rico*, 217 U. S., 475, 486.

As to agency constituting privity for the purpose of invoking the doctrine of *res judicata*, the law is, as stated by Judge Blodgett in *Lea* v. *Deakin*, 15 F. C., 8154. There the proprietor of Worcestershire sauce brought suit in England against an alleged infringer. The suit was dismissed and no appeal taken. Then suit was brought against Deakin, the agent of the alleged English infringer in the United States. It was said:

> "I see nothing in the record to raise a doubt that the case was outside of its merits; I think therefore that the case is a bar to the action of the plaintiffs. They brought the suit against Millar, the principal of the defendant in this case, on the very subject matter of controversy here; they asked for an injunction for the same reasons that the injunction is asked here and for substantially the same general relief. It was refused by the Master of the Rolls and the bill dismissed. Deakin, the defendant here, has acted for Millar, the defendant in that case. It would be an anomaly, if it were true, that Millar could manufacture and sell his sauce in England, and at the same time Deakin, who sells it here and obtains it from him, could be restrained at the instance of the plaintiff from selling it."

In *U. S.* v. *Delaware, Lackawanna & Western Rd. Co.*, 238 U. S., 516, 529, it was said in construing and applying the Anti-Trust Act and the Commodity Clause:

> "But the decisions construing the statute, recognize that one corporation can be an agent for another corporation and that by means of stock ownership one of such companies may be converted into a mere agent or instrumentality of the other."
>
> *U. S.* v. *Lehigh Valley Rd. Co.*, 220 U. S., 257, 273.

As to estoppel arising from known participation in or conduct of the defence of a suit, for protection of an interest either as manufacturer, purchaser or guarantor, the doctrine is well laid down in *Penfield* v. *Potts & Co.* (61 C. C. A., 371), 126 Fed., 475, 479, where it is said:

> "Thus the question in respect of the infringement of the third claim was in each of these two cases identical, and, if the appellants were privies with the Anderson Machine Company in such sense that they would have been concluded by a decree determining a question litigated upon the same evidence in each case, it must follow, from the mutuality of an estoppel, that the patentees who were plaintiffs in both cases would be also concluded, for an estoppel by judgment or decree must be mutual. The appellants, not having been parties of record to the Indiana case, can only rely upon the decree in that case by showing that they in fact defended that suit in their own interest, and that it was done openly, or otherwise that it was done with the knowledge of the appellees who were the opposite parties. That the appellants did join with the Indiana defendant and others in the defense of that case, we think is made out plainly, and that their conduct in defending that case, as well as the other suits upon the same patent, was well known to the oposite party who were plaintiffs in that suit as well as in this, is not denied. The doctrine is well settled that one who for his own interest joins in the defense of a suit to which he is not a party of record is as much concluded by the judgment as if he had been a party thereto, provided his conduct in that respect was open and avowed or otherwise well known to the opposite party. The question has once before been before this court in *Lane* v. *Welds,* 39 C. C. A., 528, 99 Fed., 286, where the cases are collected. An estoppel by decree exists, although the demand in the two cases is not the same, whenever the question upon which the recovery in the second case depends has been before decided, under like conditions, between the same parties or those in privity with them. *Southern Pac. R. Co.* v. *United States,* 168 U. S., 1; 18 Sup. Ct., 18; 42 L. Ed., 355."

In *David Bradley Mfg. Co.* v. *Eagle Mfg. Co.* (6 C. C. A., 661), 57 Fed., 980, 985, it is declared:

> "The suit in the Circuit Court of the United States for the Southern District of Iowa was brought to restrain the infringement of the same claims of the same patent here in question. The defendant there was the agent of the present appellant in the sale of the infringing machines. The defense of the suit there was assumed and prosecuted by the appellant here. The appellant was in fact the real party to that litigation, and, so far as the decree there is *res judicata,* is as effectively concluded thereby as if it were the actual defendant to the record. *Lovejoy* v. *Murray,* 3 Wall., 1, 18, 19; *Robbins* v. *Chicago,* 4 Wall., 657, 672."

The cases shade into each other as to facts, but are all in unison as to principle, and this doctrine is voiced in comprehensive terms in *Kessler* v. *Eldred,* 206 U. S., 285. The various relations held in the above decisions, respectively, to constitute a privity relation sufficient to apply the rule of *res judicata* are all combined in the present case, for here agency, entire stockholding, purchase, guaranty and assumption of defence, and also identity of subject matter and knowledge of these relations on the part of the opposite litigant are all shown. Upon this condition the Seventh Circuit Court of Appeals was bound, not as a matter of comity, but as a matter of law, to recognize the decision of the Sixth Circuit Court of Appeals and its directed decree in the lower court as final, conclusive and binding upon all of the parties before it.

(5) The pernicious result of the failure of the Seventh Circuit Court of Appeals to apply the doctrine of *res judicata* is shown by the effect of its adjudication on both the Railroad Company and the Hart Steel Company. The decree in the Sixth Circuit was binding on the Railroad Supply Company, the Elyria Iron and Steel Company and the Railway Company.

So was the subsequent decree of the Seventh Circuit of Appeals. This result is the anomalous situation of a subsequent decree of another court on precisely the same issues, subject matter and evidence, and between the same parties and their privies, overturning and nullifying the first decree and making illegal, enjoining and directing an accounting for what the prior decree had adjudged to be lawful and permissible. Under the Sixth Circuit decree the Elyria Iron & Steel Co. lawfully and without infringement of the Wolhaupter Letters Patent owned by the Railroad Supply Company made and sold the five thousand tons through the medium of its sales agent, The Hart Steel Company, to the Railway Company; under that decree the Railway Company lawfully purchased and may use those plates; under that decree the Elyria Company may continue to make, use and sell, directly and through agents, tie plates of the form in question; under that decree the Railway Company may in future purchase such tie plates from the Elyria Company and lawfully use such tie plates in track. This present and future use by the Railway Company results not only from its rights as purchaser from an adjudged lawful maker, but by reason of its privity as the real defendant in the suit in the Sixth Circuit. But under the subsequent decree of the Seventh Circuit Court of Appeals, the Hart Steel Company, sales agent, must account for the sale of the identical five thousand tons of tie plates adjudged to have been lawfully made and sold by the Elyria Company through it as sales agent, and is enjoined from selling like plates in future. The Railway Company, by reason of its privity as acknowledged defender of the suit, is both, in the Seventh Circuit, liable for damages on accounting and subject to punishment for violation of the injunction. And the Railway Company, though free under the decision of the Sixth Circuit Court of Appeals, to buy in future

this form of tie plate from the Elyria Company and install and use such tie plates in track, will violate the directed injunction of the Seventh Circuit Court of Appeals, entered in a suit to which the Railway Company is practically a party, by doing the very things which the Sixth Circuit Court of Appeals has adjudged lawful in a suit where the Railroad Supply Company was complainant and the Railway Company, with full knowledge of complainant, as guarantor and buyer, conducted the defence and was in privity with the formal party defendant. The Hart Steel Company is in a similar embarrassing position. While the Elyria Iron and Steel Company is free to make and sell the identical tie plate litigated as an infringement, throughout the United States, the Hart Steel Company, its selling agent, is enjoined and will be in contempt of the Seventh Circuit Court of Appeals, if it continue to act as the sales instrumentality for what the manufacturer is lawfully entitled to make and sell. These embarrassing consequences result from not following the plain rules of *res judicata*. (*Kessler* v. *Eldred*, 206 U. S., 285.)

(6) Although, of course, by the granting of the two writs of certiorari and the consolidation of the two cases this court has full jurisdiction to adjust the entire situation between all the parties, the failure of the Seventh Circuit Court of Appeals to give effect to the prior final decision and decrees in the Sixth Circuit constitutes reviewable error when the requisite identity of subject matter and privity between the parties as here is established.

Washington Bridge Co. v. *Stewart*, 44 U. S. (3 How.), 413, 423-426.

French, Trustee, v. *Hay*, 89 U. S. (22 Wall.), 238, 246, 248.

IV.

The Merits of the Case.

The claims of the Wolhaupter letters patent are each void for want of patentable combination and lack of patentable invention and novelty.

(1) *The Wolhaupter Letters Patent and their claims.* The first letters patent sued on were No. 538,809, application March 13, 1895, issued May 7, 1895, to Benjamin Wolhaupter for a tie plate with 14 claims, of which Claim 8, the only one alleged to be infringed, reads as follows:

> "A railway tie plate formed on the under side with devices more or less sharpened adapted to penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests, substantially as described." (Exhibit "A" to bill of complaint P. R., Vol. I, pp. 11-14);

letters patent to Benjamin Wolhaupter, No. 691,332, application filed May 3, 1897, renewed November 9, 1901, issued January 14, 1902, for railway tie plate with 5 claims, of which Claims 1, 2 and 3, reading as follows, are claimed to be infringed:

> "1. A railway tie plate provided on its upper side with one or more flanges on which the rail may rest or by which it is directly sustained and on the under side with one or more tie engaging flanges extending parallel with the upper flanges and directly beneath the latter, substantially as described.
>
> 2. A railway tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained and on the under side with one or more tie engaging flanges extending parallel with the upper flanges and directly beneath the latter and sharpened to permit them to readily enter the tie, substantially as described.
>
> 3. A railway tie plate provided on its upper side with one or more flanges on which the rail may rest, and by which it is directly sustained, on the under

side with one or more sharpened tie engaging flanges extending parallel with the upper flanges and directly beneath the latter, and on the upper side with an additional flange or flanges extending above the plane of the rail sustaining flanges and adapted to receive the lateral thrust of the rail, substantially as described." (Exhibit "B" to bill of complaint, P. R. Vol. I, pp. 15 and 16);

and letters patent issued to Benjamin Wolhaupter, No. 721,644, application filed March 31, 1902, dated February 24, 1903, for tie plate, with 9 claims, of which Claims 7 and 9, reading as follows, are alleged to be infringed:

"7. A tie plate provided in its rail supporting surface with transverse grooves or channels, and at one margin of said supporting surface with a transverse rail abutting shoulder.

* * * * *

9. A tie plate provided in its rail supporting surface with transverse grooves or channels, reaching to the edge of the plate, and at one margin of said surface a transverse rail abutting shoulder." (Exhibit "C" to bill of complaint, P. R. Vol. I, pp. 19-22.)

Without attempting a detailed description of the various devices described and illustrated in the various Wolhaupter patent specifications, it is enough to say that in each instance the device is highly specialized and its desirable features shown as detailed, special and limited construction and that in each instance the claims are combination claims. In letters patent No. 538,809, while the device shown is an arch and girder construction, stepped or diagonalized at each end to enable reseating in the tie, with both upper and lower flanges parallel to the tie and crosswise of the rail and an extension of upper flanges to form a side rail shoulder, Claim 8 is for a tie plate with more or less sharpened devices on the under side adapted to penetrate and engage the tie and with a series of flanges on the upper side supporting the rail.

In letters patent No. 691,332, which show the same narrow flange construction with both upper and lower flanges at right angles to the rail and lengthwise of the tie and the same extension of upper flanges at ends to make rail abutting shoulders, the first claim is for a tie plate with flanges on the upper surface supporting the rail and tie engaging flanges on the under side parallel and directly beneath the upper flanges. The second claim is for the same combination save that the lower flanges are sharpened to permit them to engage the tie. The third claim is for the same arrangement of upper flanges and lower sharpened flanges combined with an additional upper side flange to receive the lateral thrust of the rail. In letters patent No. 721,644, describing and illustrating a form of tie plate to be formed from old rails, the upper surface is flat and channeled or grooved parallel to the rail and across the tie, there is an upper side, rail abutting shoulder and a lower sharpened tie engaging flange parallel to the tie and at right angles to the rail, claim 7 is for a tie plate combining upper transverse grooves or channels and a transverse abutting rail shoulder on one margin, and claim 9 is for the same style of plate with the channels reaching to its edges (Exhibit III, p. 107, 213 Fed., 790).

The alleged new concept or invention which is now sought to be secured by these letters patent consists of channeling or flanging the upper surface of a railway tie plate for the purpose of securing strength with less weight and affording water and sand outlet underneath the rail. While this upper surface flanging or channeling of tie plates is claimed only in combination with the other features of tie engaging projections on the bottom (first Wolhaupter patent claim 8 and second patent claims 1 and 2); lower tie penetrating flanges and side or rail abutting flanges on the upper side (second patent claim

3); and upper side rail abutting shoulder (third patent claim 7); channeling, grooving and flanging the rail bearing surface is asserted to have been the element of invention first introduced by Wolhaupter and was the attempted basis by complainant's experts for showing invention in Wolhaupter and sustaining the validity of the letters patent. Inasmuch as the only practical and desirable modifications of an original flat tie plate, are shoulders on the upper side to prevent lateral movement of the rail; tie engaging projections in the shape of ribs, claws, spurs or flanges on the lower side to prevent plate lateral movement on the tie; and surface corrugations on the part of the plate sustaining the rail, it is at once evidence that if these alleged combinations can be sustained Wolhaupter had secured for the patent periods a monopoly on any variation or alteration of a flat upper-faced tie plate. Before discussing the state of the art, it is desirable to consider whether channeling, flanging or corrugating a rail supporting surface in a tie is invention.

(2) *Channeling, flanging or corrugating the rail bearing surface of a tie plate is not patentable novelty or invention.*

Henry W. Carter, without even an attempt at contradiction on the part of complainant's experts or witnesses, testified that cutting away surplus metal in order to lighten any construction did not involve anything more than the most ordinary mechanical skill (P. R. Vol. I, p. 358); that the difference between one channel and a plurality of channels is simply a matter of duplication, and that the lightening of a tie plate and providing for the escape of sand and moisture beneath the rail by means of a series of channels, transverse or longitudinal, was common in the tie plate art prior to the

Wolhaupter patents (P. R. Vol. I, p. 377); that the feature of having the rail supporting surface in a tie plate channeled or cut away to lighten the plate and provide to the escape of sand and moisture from beneath the rail (assuming that this is a material function), is shown in a great number of prior patents (P. R. Vol. I, p. 378); that longitudinal, as well as transverse "sand troughs" or grooves in the rail supporting surfaces of tie plates was repeatedly disclosed in the art prior to any Wolhaupter patent (P. R. Vol. I, p. 391); that cutting away surplus metal in any structure is obviously a matter wholly within the choice and judgment of the mechanic and is common in mechanical practice throughout the mechanical arts (P. R. Vol. I, p. 408); that the supplying of the upper surface of the plate with one or more rail abutting shoulders, and the cutting away of the surface to remove surplus metal, if desired, is a matter of ordinary mechanical skill and judgment open to any mechanic (P. R. Vol. I, p. 410); that it was common practice to form grooves or channels in the upper surfare of tie plates whenever desired and a commoner practice to cut away surplus metal in any structure whenever deemed desirable (P. R. Vol. I, p. 412); again, that it was and is common practice to cut away surplus metal whenever desired in order to lighten mechanical structures of all kinds and specifically, a common practice to channel or groove rail supporting surfaces of tie plate to afford escape of sand and moisture from beneath the rail (P. R. Vol. I, p. 413). This evidence as to the general and special uses of channeling or grooving to lighten metallic devices was absolutely uncontradicted or criticized and as to channeling tie plate surfaces is shown by the letters patent, printed publications and tie plate devices used and shown by the evidence.

Of course, channeling means ridging or flanging, and ridging or flanging means channeling. Corrugation means both channels and flanges. Channeling, flanging or corrugating metallic devices is not invention but at most mechanical improvement under the decisions of this and many other courts.

In *Peters* v. *Hanson*, 129 U. S., 541 (March 5, 1889), in passing upon the validity of letters patent for an improvement in vehicle dashes provided with slots or openings, slotted bearings and channeled feet and sides, this court said (p. 553):

> "There was no invention in providing such bearing, either by an increase in the quantity of metal or otherwise, so as to strengthen the proper part, in the proper way, for its proper duty,"

and after holding that there was nothing new or novel in the use of slots, said in reference to the channels in the foot and sides of the frame (p. 553):

> "The idea of using iron with channels or recesses in it, to produce any result due to the existence of such channels or recesses, was old as the state of the art of working in metals,"

and, therefore, held that the patent was void for lack of invention. In *Harwood* v. *Gt. Northern Railway Co.*, 2 B. & S., 194, 11 H. L. C., 654, 667, 684 (July 6th, 1865), the House of Lords in affirming the conclusion of the Court of Appeal, held that channeling the outer surfaces of fish plates (long metallic plates placed on the side of the rails at joints and secured by bolts through rail and plates) for the purpose of securing lightness without loss of strength and affording a recess whereby the bolt nuts were locked was not sufficient novelty or invention to justify letters patent. Lord Wensleydale said (685):

> "After considering these arguments, especially that of the judges of the Exchequer Chamber, delivered by Mr. Justice Willes, and that delivered in this House by Mr. Baron Channell, I have satisfied myself

that the alleged discovery of the plaintiff had no such novelty in it as to entitle it to a patent. His plan was to attach to the sides of the railway, under the joints of the rails, plates or fishes of iron, grooved, which clearly means channelled from end to end, without flanges, so as to be adapted for receiving the heads of the bolts, which are prevented from turning round when the nuts are screwed on. A similar process had been used long before in the case of pieces of timber lying horizontally on one another, and each constructed with grooves, which received the square heads of the bolts, and prevented the heads of the bolts from turning.

I agree entirely that the application of this principle laterally which had before been applied horizontally, the application to the sides of a railway of the same principle which had long been in practice for securing the sides of pieces of timber lying on each other to the sides of timber placed in contact with them, is not such a novelty of invention as to be a sufficient warrant for a patent. It is so clearly connected with the former practice as not to have the merit of a new discovery.

On this ground, therefore, I entirely agree with the majority of the learned judges in the view they have taken and so clearly explained in this case."

These decisions are not only cogent authority but anticipatory publications in both countries circulated long before any Wolhaupter patent. (*See Note* 1.)

Note 1. This lack of patentable novelty or invention in channelling has been the consensus of courts. *Peters* v. *Hanson*, *supra*, was approved and applied, and the combination of a gripping chuck (undoubtedly channelled), a supporting rest and cutting tool held devoid of invention in *Howe Machine Co.* v. *National Needle Co.*, 134 U. S., 388, 397.

In *Buckingham* v. *Springfield Plow Co.* (Apr. 25, 1892), 51 Fed., 236, 237, channeling the beam of a plow to obtain lightness without affecting strength was held not invention. Here the claim was for the combination in a plow beam of an upper and lower flange, an upper and lower fillet and a concavity between. Judge Blodgett, quoting the scoffing remark that "God could not help making valleys so long as he made hills," said that such concavity was found in T railroad rails, in bridges and building girders and beams, and in fact any form of beams where the top and bottom are wider than the metal neck, and that the concavity was as old as flanges and fillets, and always goes with them in similar structures.

Marshall v. *Packard*, 51 Fed., 755, 756, on the authority of *Burt* v.

It is therefore the decision of many courts that channeling or flanging metallic plates or beams is not inven-

Evory, 133 U. S., 349, held void for lack of invention letters patent for a continuous rubber sole with projections at heel and tread.

Goodenough v. *Cary*, 77 Fed., 827, 828, held a patent for lacing studs whereby non-metallic plastic materials were fastened to the heads by attachment to a crimped or corrugated flange, void for want of invention.

Lane v. *Welds* (39 C. C. A., 528), 99 Fed., 286, 292, held a crimped, kinked or corrugated metallic picket for wire fence substituted for a straight picket and interwoven with the supporting strands not coverable by letters patent and void for lack of invention.

Boss Mfg. Co. v. *Thomas*, (105 C. C. A., 243), 182 Fed., 811, 814, held that there was no invention in a corn husker by the extension of the lug through the plate, turning it in an opposite direction and attaching it by means of a screw or its equivalent, instead of a rivet.

Towne Steering Wheel Co. v. *Lee* (120 C. C. A., 463), 199 Fed., 777, 778, decided that letters patent for a steering wheel for automobiles having a rim with a smooth outer surface and an inner surface with scallops or indentations to prevent the grip from slipping, was void on its face for lack of invention.

Servis R. R. Company Tie Plate Co. v. *Hamilton Steel & Iron Co.*, 8 Canadian Exch. Rep., 381, held that the letters patent issued to Servis in 1884 for the same tie plate device shown in U. S. letters patent No. 294,816 (P. R., Vol. III, pp. 1102-1104), having projecting flanges at its sides or edges, adapted to strengthen the plate and be forced into the tie were void for these reasons:

> "Prior to Servis' alleged improvements iron or steel plates had been used as tie plates; and of course it was common knowledge that the insertion of such a plate between an iron or steel rail and a wooden tie would keep the rail from cutting or wearing the wood of the tie, and so in that respect cause the tie to last longer. It was also a matter of general knowledge that if one wished to reduce the weight of the plate without loss of strength that could be done by using channel iron or angle iron, or, which comes to the same thing, by having the plate made with flanges or ribs. It was equally a matter of common knowledge that if such flanges or ribs were made thin enough or wedge shaped or sharpened they could be driven into any piece of wood to which it was desired to attach them, and that such flanges or ribs would in that position assist in holding the plate in place. So for my part I have been quite unable to see wherein there was any invention in either of the improvements for which the Servis patents were granted. And when the question is asked whether there is any invention to sustain the Servis patent of 1884, it makes no difference, it seems to me, whether we start out with a plain flat plate that anyone was free to use, or with the Servis plate of 1882. Regarding the case from either standpoint I agree with the opinion of those witnesses who thought that there was no invention in the alleged improvements of 1884 to sustain the patent in question here."

Thus, it was decided that in Canada as far back as 1884 that channels, and consequent flanges or ribs in tie plates reducing weight without loss of strength, were matters of common knowledge in tie plate construction.

Corrugated sheet metal culvert was held void for lack of patentable invention in *Stillwell* v. *McPherson*, 207 Fed., 837, 841.

Corrugating edges of leather-cutting die not patentable, *Independent Die Co.* v. *Savels*, 215 Fed., 122.

tion. Later, the question of whether it was in fact anticipated in the tie plate and kindred arts will be fully discussed. Both the facts and the law demonstrate that channeling as an element of tie plate construction was incapable of protection by patent monopoly. Both channeling and the other elements with which channeling and ridging are claimed in combination by Wolhaupter are demonstrated in this record to have been old, and the combination of the three features was made twenty years before Wolhaupter ever sought the Patent Office.

It is a well established principle in patent law that when various elements are claimed in combination only, such combination claim is a conclusive presumption that each element is old.

Corn Planter Patent, 23 Wall., 181, 224.
Rowell v. *Lindsay*, 113 U. S., 97, 101.
Water-Meter Co. v. *Desper*, 101 U. S., 332, 336.
Millar v. *Brass Co.*, 104 U. S., 350, 352.
Richards v. *Chase El. Co.*, 159 U. S., 477, 486.
National News Board Co. v. *Elkhart Co.*, 115 Fed. Rep., 328, 330.
Irwin v. *Hasselman*, 97 Fed. Rep., 964, 968.
Campbell v. *Conde Implement Co.*, 74 Fed. Rep., 745, 747.

(3) *Aggregation. The claims of the three letters patent sued upon are for mere aggregations and not patentable combinations.*

A tie plate is a metallic plate put under a railway rail upon the tie to take the rail wear from the tie, better distribute passing weights and by securing rigidity between rail and tie prevent track spreading. (Henry W. Carter, P. R., Vol. I, p. 344, John Howard McElroy, Vol. I, p. 58.) It is a metallic plate interposed between rail and tie for the purpose of preserving the

tie and holding the rail firmly in place. Originating in an inserted flat piece of wood and then of metal, an endless variety of detail and forms are shown in the literature and application of the art. Variations appear in having one or more upper side shoulders to prevent lateral rail movement, upper surface channels, flanges or corrugations to support the rails and lower tie-engaging projections to prevent plate movement on the tie. These features in various forms, both separately, two and two, and all three, were used in tie plates, rail joints and rail chairs long before the first application by Wolhaupter. While it might be said that the union of the upper side shoulder and lower tie-engaging projections co-operates to retain plate and rail immovable and prevent lateral displacement of the rail on the tie, it is both shown and conceded that top rail supporting flanges and corrugations and intervening channels have no combined action or joint effect with either upper side shoulders or the lower tie-engaging ribs or flanges. Carter declares that there is no combination in a patent sense between the bottom surface flanges or projections and surface corrugation, flanging or channeling under the rail (P. R., Vol. I, p. 347) and states that corrugations on the upper surface and the upper lateral shoulder do not interact or co-operate in any way to produce any new result which is anything more than the bringing together of the separate functions contributed by each without respect to the presence or absence of the other. Also that there is no necessary structural or functional relation between a series of flanges on the top of the plate and devices more or less sharpened adapted to penetrate or engage the tie on the lower side. (P. R., Vol. I, p. 348.) McElroy, defendant's expert, testified to precisely the same effect, stating that the top corrugations and channels serve to support the rail by obtaining the requisite strength with

the least amount of metal and allowing foreign substances like sand and water to readily escape; that these are their only functions and have no relation to the functions or results of the lower tie-engaging projections (P. R., Vol. I, 70, 71 and 72); that the only function of the side top shoulder is to resist the lateral thrust of the rail and that this upper shoulder has no effect on the action of upper surface corrugations or they upon it. (P. R., Vol. I, 72, 73.) Benjamin Wolhaupter, so far as operation, functions or results are concerned corroborates this testimony. (P. R., Vol. I, 187, 188, 189, 190, 191 and 192.) All that is claimed or argued for channeling or flanging the upper plate surface, is lightness without loss of strength, permitting escape of foreign substances, and lessening surface wear or abrasion. The only correlation, combined result or action of the shoulders, corrugations and tie-engaging projections would be a rather far-fetched and indefinite one between the upper side shoulder and lower tie-projecting flanges or ribs (entirely eliminating the flanging, channeling and corrugating as a contributing factor), but no such combination is claimed in the Wolhaupter patents. There is no correlative or joint result or any new effect, result or function from the combination of upper surface corrugations, flanges or channels and upper side shoulders; or upper surface corrugations and channels and lower tie-engaging flanges or ribs, or between upper side shoulders and lower tie-engaging flanges or ribs due to the interposition of rail bearing upper corrugated or flanged surfaces.

(4) *Decisions as to patentable combination. Under the doctrine so clearly and repeatedly enunciated and applied by this court, all the claims in suit are for mechanical aggregations and not for patentable combinations.*

Hailes v. *Van Wormer*, 20 Wall., 353, 372.
Reckendorfer v. *Faber*, 92 U. S., 347, 355, 357.

Pickering v. *McCullough*, 104 U. S., 310, 317.
Slawson v. *Grand Street Ry. Co.*, 107 U. S., 649, 653.
Bussey v. *Excelsior Mfg. Co.*, 110 U. S., 131, 145.
Florsheim v. *Schilling*, 137 U. S., 64, 77.
Fond du Lac County v. *May*, 137 U. S., 395, 406.

See, also:

Phillips v. *Detroit*, 111 U. S., 604, 606.
Stephenson v. *Brooklyn Cross-Town Railroad Co.*, 114 U. S., 149, 158.
Thatcher Heating Co. v. *Burtis*, 121 U. S., 286, 294.
Hendy v. *Miners' Iron Works*, 127 U. S., 370, 375.
Royer v. *Roth*, 132 U. S., 201, 206.
Busell Trimmer Co. v. *Stevens*, 137 U. S., 423, 433, 435.
Union Edge Setter Co. v. *Keith*, 139 U. S., 530, 538.
Adams v. *Bellaire Stamping Co.*, 141 U. S., 539, 542.
Brinkerhoff v. *Aloe*, 146 U. S., 515, 516.
Knapp v. *Morss*, 150 U. S., 221, 227.
Richards v. *Chase Elevator Co.*, 158 U. S., 299, 302, and 159 U. S., 477, 485, 487.
Office Specialty Manf. Co. v. *Fenton Metallic Manf. Co.*, 174 U. S., 492, 497, and Note 2.

Note 2. The construction and application of this doctrine in the lower courts is both interesting and instructive. In the following cases the patents were held aggregations and not patentable combinations.

(Cigar-bunching machine.) *National Progress Bunching Machine Co.* v. *John R. Williams Co.*, 44 Fed., 190, 192.

(Catch basin.) *Campbell* v. *Bailey*, 45 Fed., 564, 565.

(Street railway flanged rail.) *The Johnson Co.* v. *Pacific Rolling Mills Co.*, 47 Fed., 586, 591.

(Combined oil tank and merchandise car.) *Standard Oil Co.* v. *Southern Pacific Ry. Co.*, 48 Fed., 109; 54 Fed., 521, 526.

(Bath tub over-flow devices.) *J. L. Mott Iron Works* v. *Standard Manf. Co.*, 51 Fed., 81, 85.

The learned court in its opinion below disposed of this question of aggregation or non-patentable combination very peremptorily by saying (*Railroad Supply Co.* v. *Hart Steel Co.* (128 C. C. A., 23), 222 Fed., 267, 268) in substance that the result of the combined features of upper surface side shoulder, corrugated rail supporting surface and lower tie-engaging projections was an improved tie plate. The rule against mere aggregation, however, both in numerous decisions and by express declaration, applies not only to machinery but to manufactured articles which are not machines or active in their mechan-

(Transplanting machine.) *Fuller & Johnson Manf. Co.* v. *Bender*, 69 Fed., 999, 1001.

(Dredging machine boom for using scoop or bucket.) *Osgood Dredge Co.* v. *Metropolitan Dredging Co.*, 75 Fed., 670, 672.

(Folding chair.) *Schwarzwaelder & Co.* v. *City of Detroit*, 77 Fed., 886, 892.

(Soda water fountain.) *Green* v. *American Soda-Fountain Co.*, 78 Fed., 119, 123.

(Bi-transit railway system.) *Fowler* v. *New York*, 121 Fed., 747, 749.

(Stove lining.) *Germer Stove Co.* v. *Art Stove Co.*, 150 Fed., 141, 145.

(Hot air furnace.) *James Spear Stove and H. Co.* v. *Kelsey Co.*, 158 Fed., 622, 626.

(Car heating apparatus.) *Safety Car Heating & Lighting Co.* v. *Consolidated Car Heating Co.*, 160 Fed., 476, 488.

(Printing die.) *Kuhn* v. *Lock-Stub Check Co.*, 165 Fed., 445, 446.

(Dress skirt.) *Greenwald Bros* v. *Enochs*, 180 Fed., 478, 479.

(Grab hook.) *Langan* v. *Warren Axe & Tool Co.*, 181 Fed., 143, 147.

(Driving gear for automobile.) *Warner Instrument Co.* v. *Stewart & Clark Mfg. Co.*, 185 Fed., 507, 510.

(Fireproof window.) *Voightmann* v. *Seely*, 198 Fed., 485.

(Society initiation apparatus.) *Alexander* v. *De Moulin Bros.*, 199 Fed., 145, 147.

(Circuit interrupting device.) *Condit Electrical Co.* v. *Westinghouse Co.*, 200 Fed., 144, 146.

(Concrete dam.) *Turner* v. *Moore*, 211 Fed., 466, 469.

(Drilling machine.) *Barnes Co.* v. *Van Dyck Churchill Co.*, 213 Fed., 236.

(Superimposed engine in coal hoist.) *Mead Morrison Mfg. Co.* v. *Exeter Machine Works*, 215 Fed., 731, 733.

(Automatic coin weighing machines.) *Autosales Gum & Chocolate Co.* v. *Caille Bros. Co.* (140 C. C. A., 159), 224 Fed., 473, 476.

(Water gas apparatus.) *Gas Machinery Co.* v. *United Gas Improving Co.* (143 C. C. A., 206), 228 Fed., 684, 686, 691.

(Pivot Axle Cultivator.) *Gale Mfg. Co.* v. *May*, 229 Fed., 575, 576.

(Manure spreader axle.) *Keene* v. *New Idea Spreader Co.* (C. C. A.), 231 Fed., 701-708, 710.

(Automobile horn.) *Lovell-McConnell Mfg. Co.* v. *Oriental Rubber & Supply Co.* (C. C. A.), 231 Fed., 719, 723.

(Water-closet tanks.) *Ft. Pitt Supply Co.* v. *Ireland & Matthews Mfg. Co.*, 232 Fed., 871, 874.

ical operation. Fireplaces, lead pencils and erasers, moulding crucibles, street car signal devices, street car collecting devices, stoves, double-headed tacks, block pavements, ore stamp feeders, car doors and fastening devices, machines for treating raw hides, boot and shoes, corsets, sole cutters, sole edge burnishers, lanterns, rectal mirrors, dress forms, grain elevators, book cases, railroad rails, railroad cars, waste valves, transplanting machines, dredging machines, folding chairs, soda water apparatus, cabinets, railroad platforms, burners, furnaces, blank books, car heating appliances, regulators, type-block fasteners, thills, grab hooks, speed indicators, miners' lamps, all have been subjects of the application of the rule holding aggregation and not patentable combination though the device was bettered by the alleged invention. The Circuit Court of Appeals for the 7th Circuit, in deciding *Antisdel* v. *Chicago Hotel Co.* (32 C. C. A., 216), 89 Fed., 30, expressly held that the rule distinguishing mere aggregations from patentable combinations applies to articles of manufacture as well as to mechanical appliances and in *Ryan Car Co.* v. *Live Poultry Transportation Co.* (115 C. C. A., 435), 195 Fed., 525, 527, held the union of various old contrivances for feeding, watering and caring for stock in a car for its transportation not co-operating to or producing any new result by joint action mere aggregation and not patentable combination, applying *Fond du Lac County* v. *May*, 137 U. S., 395, and *Market Street R. Co.* v. *Rowley*, 155 U. S., 621, 629. The opinion is wholly inconsistent with the prior rulings of that court on the subject of aggregation and a radical departure from the decisions of this court.

(5) *Wolhaupter Letters Patent are void because of anticipation and lack of novelty.*

First Wolhaupter patent. The first Wolhaupter tie plate patent, it will be recalled, was applied for March

13, 1895, and issued May 7, 1895, with claim eight for a railway tie plate formed on the underside with devices more or less sharpened adapted to penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests, substantially as described. (P. R., Vol. I, pp. 11-14.) The specifications clearly recognize in prior tie plates and letters patent the use of upper side shoulders to receive the lateral thrust of the rail (P. R., Vol. I, p. 12, lines 13-49), and also describe and show such upper side shoulders in the device shown in the specification drawings. (P. R., Vol. I, p. 11, Figures 1 and 2; P. R., Vol. I, p. 12, lines 50-60.) These side shoulders are made by extending upward the extremity of each upper flange outside of the rail base. Side shoulders, however, are not claimed as an invention, either separately or in combination. (Claim Eight, P. R., Vol. I, p. 14.) (See also Aluminum Model "O" and 213 Fed., 790, and 222 Fed., 264.) The elements of the alleged invention emphasized throughout the specifications are the combination of strength and lightness claimed as a result of the arch and girder construction and the stepped or diagonal ends of the plate, whereby a new position in the tie can be given to the tie-engaging lower flanges when the old position is worn. The flanges and grooves in the upper surface are shown parallel to the tie and at right angles to the rail, and the tie-penetrating flanges or ribs on the lower surface are in the same direction. Thus the rail is transverse and the tie is longitudinal to all flanges and grooves, both upper and lower. (P. R., Vol. I, pp. 11-14.) The tie plate of defendant is simply a rectangular flat piece of metal with a shoulder near one edge parallel to the rail, two shallow grooves or channels parallel to this shoulder leaving two lateral and one central bearing surfaces parallel to and underneath the rail, and two V-shaped short

ribs projecting from the under surface underneath the top rail bearings and engaging in the tie crosswise. (P. R., Vol. I, p. 22; Exhibit "D" to bill of complaint. *Railroad Supply Co.* v. *Elyria Iron & Steel Co.*, 213 Fed., 789, 790, 791; *Railroad Supply Co.* v. *Hart Steel Co.*, 222 Fed., 261, 264, 276; Complainant's Exhibit No. 15; Carter, P. R., Vol. I, p. 361; McElroy, P. R., Vol. I, p. 65.)

Tie plates, rail joints and rail chairs are analagous devices and relate to kindred arts. The anticipating devices shown in letters patent, described in printed publications, and in actual use prior to application for the first Wolhaupter patent are for tie plates, rail joints and rail chairs. All of these devices are inserted between the rail and the tie and operate to a greater or less degree to protect the tie from wear and hold the rail in alignment by preventing lateral motion. They are all concerned with rails and ties in railroad tracks and relate to the same art and are closely related to each other. Carter so declares. (P. R., Vol. I, p. 314.) Defendant's experts and witnesses admit this in spite of attempted minute distinctions between the purposes of railway chairs, railway joints and tie plates. (Wallace, P. R., Vol. II, pp. 578, 579, 580, 581; Miller, P. R., Vol. II, pp. 692, 693, Vol. II, p. 703, 704; McElroy, P. R., Vol. II, p. 781; See also Faulkner P. R., Vol. I, pp. 303, 304; and Plaintiff's Exhibit No. 21, combination joint and intermediate tie plate, P. R., Vol. II, p. 920.)

It is evident that under these facts and the decisions, rail joints, rail chairs and tie plates are all analogous devices, and are so closely allied in construction, purpose, use and operation, that they are articles in kindred arts and that devices described used or patented for any such purpose are pertinent in considering the state of

the art upon the question of the scope and validity of the claims in the letters patent in the suit.

Blake v. *San Francisco*, 113 U. S., 679, 682.
Lovel Mfg. Co. v. *Cary*, 147 U. S., 623, 627, 636.
Roberts v. *Ryer*, 91 U. S., 150, 157.
Penn. Ry. Co. v. *Locomotive Truck Co.*, 110 U. S., 490, 494.
Phillips v. *Detroit*, 111 U. S., 604, 607.
Burt v. *Evory*, 133 U. S., 349, 359.
Ansonia v. *Electric Supply Co.*, 144 U. S., 11 18.
Brill v. *Washington Ry. & Elec. Co.*, 215 U. S., 527, 531.
Harwood v. *Gt. Northern Ry. Co.*, 11 H. L. C., 654, 680, 686.
Fraser v. *Gates Iron Works* (29 C. C. A., 261); 85 Fed., 441, 446.
Bettendorf Patents Co. v. *Little Metal Wheel Co.* (59 C. C. A., 473); 123 Fed., 433, 435.
Eisenstein v. *Fibiger*, 160 Fed., 686, 688.
Wilce v. *Bush Temple of Music Co.* (67 C. C. A., 371); 134 F. R., 389, 391.
Thomas v. *St. Louis & San Francisco R. Co.* 149 F. R., 753.
Bethlehem Steel Co. v. *Niles-Bement-Pond Co.* 166 F. R., 880, 885.

Actual use of tie plates and similar devices described in periodicals or patent specifications is not necessary in showing anticipation. This is not a question of priority of invention between two inventors, where reduction to actual use and operation is essential, but a question of anticipation. Hence, descriptions, specifications and drawings are alone to be considered.

Peters v. *Active Co.*, 129 U. S., 530, 537.

Kelly v. *Springfield Co.*, 92 Fed., 614, 621.
National C. & F. Co. v. *Swift & Co.*, 104 Fed., 87, 91.
Westinghouse v. *Christensen Eng. Co.*, 128 Fed., 437, 442.
Dashiell v. *Grosvenor*, 162 U. S., 425, 432.
Brown v. *District of Columbia*, 130 U. S., 87, 99.
Shenfield v. *Nashawannuck Co.*, 137 U. S., 56, 59.
Pickering v. *McCullough*, 104 U. S., 310, 319.
French v. *Carter*, 137 U. S., 239, 245.
Howard v. *Detroit Stove Wks.*, 150 U. S., 164, 169.
Schweichler v. *Levinson*, 147 F. R., 704, 708.
Watrous Mfg. Co. v. *Am. Hardware Co.*, 161 Fed., 362, 364.
Hyde v. *Minerals Separation, Ltd.* (130 C. C. A., 576); 214 Fed., 100, 105.

Wolhaupter not only admits actual knowledge of the Servis tie plate (P. R., Vol. I, p. 173); the Fox tie plate (P. R., Vol. I, p. 174); C. A. C. plate and Goldie plate (P. R., 167, 173, 174, 179), but about the time he applied for his first patent read the pamphlets on tie plates issued (P. R., Vol. I, p. 174) and is by law charged conclusively with knowledge of all Letters Patent to the date of his application.

Duer v. *Corbin, etc., Co.*, 149 U. S., 216, 223.
Mast, Foos & Co. v. *Stover Mfg. Co.*, 177 U. S., 485, 493.
Daylight Glass Mfg. Co. v. *Am. Prismatic Light Co.*, 142 Fed., 454, 456.

With these legal principles in mind, an examination of the most pertinent anticipating letters patent, published

descriptions, and tie plates in use prior to the first Wolhaupter patent will be made.

Prior art as to the first Wolhaupter patent. It is not proposed to treat in detail all of the numerous patented devices showing the variant forms of tie plates, rail chairs and rail joints between this date and the application for the first Wolhaupter patent on March 13, 1895. (P. R., Vol. III, pp. 1071-1259.) An examination of the most similar will suffice, though all are pertinent.

DEVICES DESCRIBED IN LETTERS PATENT PRIOR TO FIRST WOLHAUPTER PATENT.

The Goldie Patent. Letters Patent to William Goldie, No. 485,030, dated October 25, 1892, for improvement in tie plates. (P. R., Vol. III, pp. 1182-1185.) This form of plate is shown in Aluminum Model (Ex. O-10) as follows:

Reproduction of Aluminum Model (Ex. O-10) of Tie Plate embodying device of Letters Patent No. 485,030, dated October 25, 1892, to W. Goldie. Plates of this form, known as Goldie Ribbed and Glendon Ribbed Tie Plates, made by Dilworth, Porter & Co. of Pittsburgh, were made from 1892 to 1895 and supplied to and used by about 50 railroads, including the Atchison, Topeka & Santa Fe Railway Co., and plates of this form actually used by the latter road from 1892 until 1906 are shown as defendants' Exhibits "B" and "C."

The description and drawings of the specifications show clearly a tie plate consisting of a rectangular metallic plate with an upper rail abutting side shoulder on the outer side, a shallow depression extending clear across the plate, with broad bearings or flanges on each side to support the rail, a corresponding convexity upon the lower side and underneath the two rail bearing surfaces two sharpened ribs for engaging in the tie. Upper side shoulders, bearings, depression or cavity and lower tie penetrating ribs are parallel to the rail. Carter says that this tie plate is so substantially identical in its construction with defendant's tie plate, that any interpretation of claim eight which makes it cover defendant's device must make the Goldie patent anticipatory of the first Wolhaupter patent; declares that the single groove or channel in the rail bearing surface would enable sand, grit and moisture to work out from beneath the rail; that actual cutting away of surplus metal in order to lighten any construction cannot involve more than the most ordinary mechanical skill and that there is no structural reason why the depression in the upper surface should not be made by actually thinning the metal under the depression, leaving the bottom of the plate flat, if so desired. (P. R., Vol. I, p. 358.)

This device was manufactured for a period of some years, 1892 to 1895, by Dilworth, Porter & Co. of Pittsburgh and supplied to and used by about 50 railroads, including the Boston & Maine; Baltimore & Ohio, Santa Fe and Pennsylvania Railroads. (Ambler, P. R., Vol. I, p. 542; Zimmerman, Vol. I, 528, 529, 530, 531, 532; Evans, Vol. I, pp. 537, 538; Ambler, Vol. I, pp. 542, 543; Cullen, Vol. II, pp. 796, 801, 802; Schleiter, Vol. II, pp. 816, 819, 820). It is

true that the cavity or depression in the upper surface was intended to partially admit a rounded rail bottom but this rounded bottom did not nearly fill the cavity and there was, both with flat and round bottom rails, a cavity clear across the plate below the rail. (Goldie, P. R., Vol. II, pp. 805, 806) and this cavity was clearly shown in the patent drawings (P. R., Vol. III, 1182) and in some of the circulars issued by Dilworth, Porter & Co. (Goldie, P. R., Vol. II, 810), and when not shown by the illustration the cavity was described in the accompanying letter press (Schleiter, P. R., Vol. II, pp. 820-821). This was known as Glendon Ribbed Tie Plate. Faulkner saw it in 1904 on the Pennsylvania Railroad. (Faulkner, P. R., Vol. I, p. 205.) In 1892 about a thousand of these plates were purchased by the Atchison, Topeka & Santa Fe Railway, placed in track under flat bottomed rails, and remained there with one removal over twelve years, giving so much satisfaction that an additional order was requested by the superintendent. (Dyer, P. R., Vol. I, p. 434; Elliott, P. R., Vol. I, pp. 247, 258-260; Faulkner, P. R., Vol. I, pp. 210-214, 226, 235, 236.) Two of these plates, Defendant's Exhibits "B" and "C," were offered in evidence. The following is a reproduction of Exhibit "C."

Top and side view of Goldie or Glendon Ribbed Tie Plate (Exhibit C) made by Dilworth, Porter & Co. and taken from the 1,000 similar plates put in track by the Santa Fe Railway Company in 1892 and used for 12 to 14 years, and also supplied to 48 other railroads.

The original exhibit clearly shows the wear of the rail on the two side bearings and the depression below the rail still existing. All this is so clearly established by the testimony that it is beyond dispute. It is insisted that the cavity in the Goldie ribbed plate was not gouged or cut out but produced by bending down the inner surface, but however produced, there were left two bearings which supported the rail and a continuous depression or cavity underneath the rail or across the plate. The upper rail abutting side shoulder and lower tie penetrating devices parallel to *and directly beneath the upper rail bearing surfaces* are clearly shown. This Goldie tie plate, as shown in the patent and aluminum model, and actually used specimens, is almost a facsimile of defendant's plate. While the depression or channel on the upper surface was intended primarily to receive a rail with a rounded base or bottom, there was always a cavity or depression beneath, even if a rounded rail were used, making it serviceable in carrying off sand, grit or water.

The Wilson patent. Letters patent 522,867, to W. H. Wilson, for railroad tie plate, issued July 10, 1894 (P. R., Vol. III, 1229-1230). This plate was clearly shown and described as a tie plate, having spike holes properly located, longitudinal ribs (crosswise in the rail) on its upper surface to prevent buckling of the plate, guards projecting on the upper surface above the longitudinal ribs, with thickened heads abutting the rail and preventing lateral movement of the rail, and spike like formations or securing shanks on bottom of plate sharpened and engaging the tie. (Specifications, P. R., Vol. III, 1230—lines 34-62, Vol. III, 1229, Fig. 1-8.) Here is a tie plate showing every feature of upper rail supporting ribs or flanges, intermediate grooves, channels or

cavities on the upper side, rail abutting shoulders preventing lateral movement and lower tie-engaging projections preventing movement of the tie.

Churchward patents. On February 28, 1893, Letters Patent 492,528, for wear plates, issued to J. Churchward. (P. R., Vol. III, 1192-1193.) The specifications and drawings exhibit a railway wear plate or tie plate with an upper flat surface supporting the rail and upper side shoulder preventing lateral movement of the rail, and a lower rib for engaging in the tie, described as a V-shaped flange. In addition there are also spurs to prevent plate moving on the tie. Put two grooves across the plate (channelling is not patentable invention) and the defendant's tie plate appears.

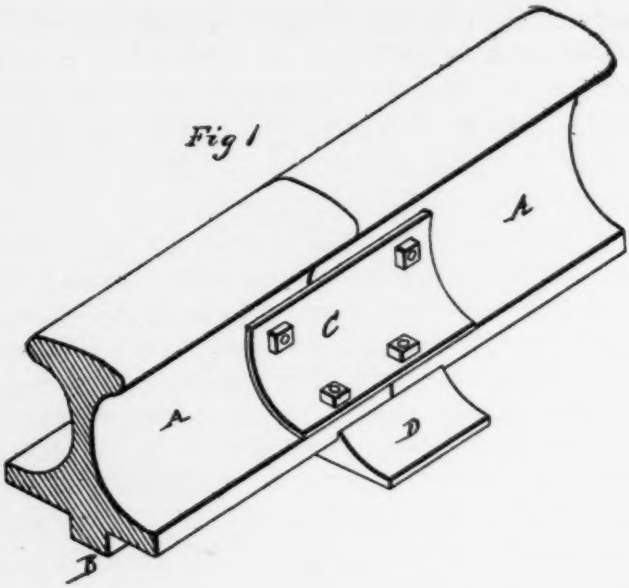
This same device was described in the Railway Age of the issue of July 8, 1892, page 507 (P. R., Vol. I, 460) and the cuts accompanying this article are shown as Defendants' Exhibit CC. (P. R., Vol. III, 951.)

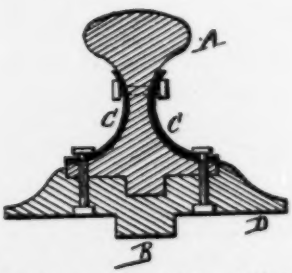
A modification of this idea is also shown in Letters Patent to J. Churchward, dated November 7, 1893, No. 508,086. (P. R., Vol. III, 1207, 1208, 1209.) The modification consists chiefly in double upper rail abutting shoulders and an unchanneled rail bearing surface. Of course both the upper surface shoulders and the lower tie-engaging projections are parallel to the rail and crosswise on the tie.

The Wooten patent. So far as the record discloses, the first letters patent relating to the subject of tie plates were No. 66,437, July 2, 1867, to J. E. Wooten for a railway chair, and show a device with an overlapping outside top shoulder engaging the outer rail flange, an inner upper vertical rail flanged shoulder, flat top and a lower tie engaging flange extending between two ties and at

each tapering end seated crosswise in the tie. (P. R., Vol. III, pp. 1068, 1069.)

The Hudson patent. August 19, 1873, Letters Patent issued to J. L. Hudson, No. 142,020, for improvement in railway joints. (P. R., Vol. III, pp. 1079, 1080.) (*Railroad Supply Co.* v. *Hart Steel Co.*, 222 Fed., 261, 268.) The base plate of this device consisted of two upper vertical shoulders between which the rail flanges rested, a rail bearing surface consisting of two bearings or flanges with a deep central groove or channel between them and a rectangular flange or rib projecting from the lower surface of the base plate and adapted to be seated in the tie. Shoulders, groove, rail bearing flanges and lower projecting rib or flange are all crosswise of the tie and parallel to the rail. A bottom rail flange fitted in the upper channel or groove and this base plate was secured to the rail flanges by bolts. But it is evident that the plate in and of itself had every element and office of a tie plate with upper side shoulders, upper groove or channel, upper rail bearing surfaces or flanges and a lower projecting tie-engaging device. Its reproduction is here shown.

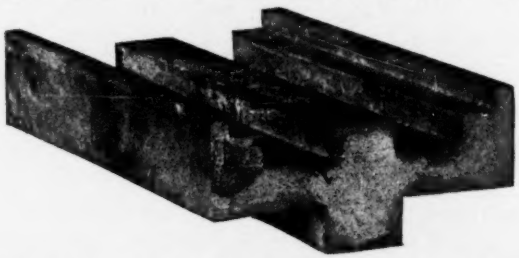




Device shown in letters patent No. 142,020, issued August 19, 1873, for Railway Rail Joints to J. L. Hudson. Specifications state that the bottom rail flange may be V in shape and the claim is for a grooved chair in combination with flanged rail. (P. R., Vol. III, pp. 1079, 1080.)

The Wells patent. Letters Patent No. 203,570, dated May 14, 1878, were issued to Isaac Wells for a railway chair. It was intended to be placed at rail joints, rested

on four ties and extended across the three intermediate spaces, consisted of two upper vertical side shoulders against which the rail flanges impinged, a rail bearing surface made of three bearings or flanges produced by two deep grooves or channels extending clear across the plate and had a lower rectangular tie-engaging rib or flange, with upper side shoulders, upper rail bearing flanges, upper grooves and lower tie engaging projection all parallel to the rail. (P. R., Vol. III, pp. 1088, 1089, 1090.) The lower tie engaging flange is directly beneath the middle upper surface flange and the upper surface grooves or channels are stated to serve as *receptacles for sand or grit* that may enter between the chair and rail and thus insure a firm bearing of the rail upon the chair bearings at all times, and that the *grooves also enable the chair to be made much lighter than the ordinary one and yet possess an equal amount of strength,* owing to the fact that the rail is fully supported at all points where the chair is subjected to strain, namely, at its center and sides. (P. R., Vol. III, p. 1089.) An eight-inch section of this device extending across a single tie, and here reproduced, is shown by Complainant's Aluminum Model Exhibit "O-6."



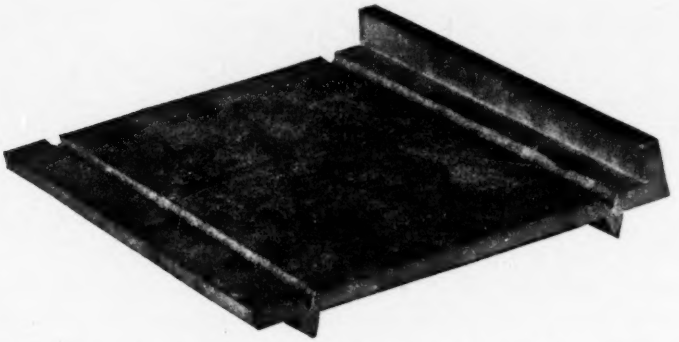
Reproduction of eight-inch section from Aluminum Model (Ex. O-6) showing Wells Rail Joint Device. Letters Patent No. 203,570, dated May 14, 1878, to I. Wells. (Rec., Vol. III, pp. 1088.) The grooves are stated to lighten the chair and to allow the escape of sand and grit.)

It is declared by Faulkner and W. B. Story that a short (six to eight-inch) section of this rail chair would make a good and practical tie plate. (P. R., Vol. I, pp. 299, 317, 318.) Carter says that it would so serve and that the language of the specification and claim almost literally describe the defendant's tie plate. (Carter, P. R., Vol. I, pp. 348, 349, 350, 351.)

Attempts by complainant's experts to belittle and distinguish this device as anticipation because of its length, lack of spike holes and alleged tendency to break the tie in seating the lower rib are met fully by the fact that tie plates are made by rolling out a long bar and then cutting off sections of the requisite lengths which are inserted on each tie, that the specifications for many tie plates, including several of Wolhaupter himself, make no provision for spike holes, and that it is a purely gratuitous assumption on the part of these experts that the lower flange or projection, which is shown without dimensions in the letters patent, would sufficiently weaken the tie in seating to cause a break. All these objections are fully overcome by the evidence of Carter. (P. R., Vol. I, p. 351.) The rule that a patentee is entitled to all uses to which his device may be applied whether stated or not also obtains for this and the other rail cushion, joint and chairs patents. *Warren-Webster Co.* v. *Dunham Co.*, 181 Fed., 836, 838; *Brown* v. *District of Columbia*, 130 U. S., 87, 100.

The Gould Patent. Letters patent No. 280,030, issued June 26, 1883, to W. F. Gould for railroad rail cushion and joint. (P. R., 1098-1110.) (Aluminum Exhibit "O-20.")

A reproduction of the aluminum model is as follows:



Reproduction of Aluminum Model (Ex. O-20) of Railroad Rail Cushion and Joint shown in Letters Patent to W. F. Gould, No. 280,030, dated June 26, 1883. (P. R., Vol. III, pp. 1098-1100.)

This is the base or tie-plate part of a railroad rail cushion and joint, and while used with additional devices shows in this separate, single part, both by description and illustration in the patent specifications, an upper surface with a shoulder or flange parallel to the rail and against which the rail base abuts; two shallow, narrow grooves extending the entire length of the plate parallel to the shoulder and rail and dividing the top of the plate into three-rail bearing surfaces. Immediately below each one of the grooves on the bottom is a sharp wedge-shaped rib for engaging crosswise in the tie. The specifications refer to these ribs as beads adapted to be pressed down and embodied in the top surfaces of wooden cross-ties without removing any wood, and it is suggested that they may vary in configuration, size and number, and that it is not essential that they should be "V"-shaped and sharp edged, but should be sufficiently small and thin so as to be adapted to be sunk in the wood by the pressure of the locomotive as the construction train

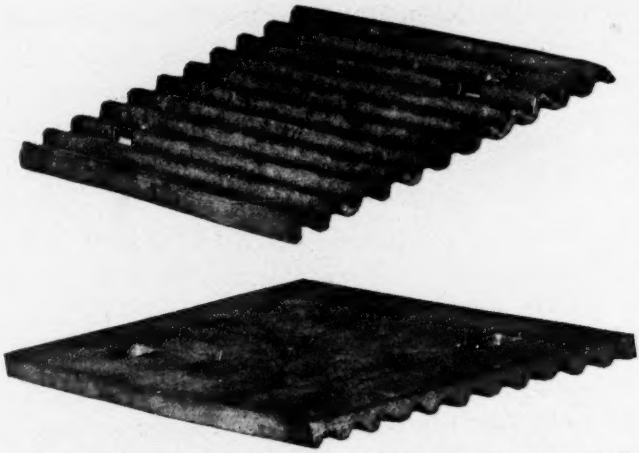
advances and the rails are laid. The longitudinal grooves or channels on the upper surface are plainly described and shown. The specifications refer to ribs or beads upon the rail bottoms which fit into the upper plate grooves, and that a rubber cushion be interposed between the rail bottom and plate, but the plate or chair considered in and by itself is perfectly adapted for use as a tie plate under a flat bottom rail. It certainly exhibits, more than twelve years before the first application of Wolhaupter, a railway cushion or plate inserted between the rail and tie, having a shoulder parallel to the rail on the upper surface to prevent lateral movement of the rail; two grooves extending clear across the plate parallel to the rail leaving three bearing surfaces for the rail to rest on; and two projecting under side ribs parallel to the rail and adapted to penetrate the tie and hold the plate immovable on the tie. A comparison of this device with that of defendant's tie plate shows the closest resemblance. Carter says that this base plate has all the characteristics of a tie plate and exhibits an upper lateral shoulder, grooves across the upper surface, rail bearing flanges or surfaces and lower tie engaging projections. (Carter, P. R., Vol. I, pp. 353, 354.)

The Dockstader Patent. Letters Patent to P. C. Dockstader, No. 462,399, dated November 3, 1891, for lock rail joint. (P. R., Vol. III, pp. 1158-1164.) This was intended primarily for use at the junctures of rails. It also performs the functions of a tie plate at the joints, and there is no reason why it would not be just as effective as a tie plate when placed on ties intermediate between joints. (130 U. S., 100.) A reproduction of the aluminum model is as follows:

Reproduction of Aluminum Model (Ex. O-7) of Lock Rail Joint shown in Letters Patent to P. C. Dockstader, No. 462,399, dated November 3, 1881. (Vol. III, pp. 1158-64.)

In the specifications the side flanges, upper surface groove and bearings for the rail and lower tie engaging projections are fully described and clearly shown in the drawings. All the essentials of defendant's tie plate are shown. There are top shoulders parallel to the rail for preventing lateral rail movement against which the rail bottoms impinge; a depression or groove parallel to the rail extending across the plate leaving two side bearings upon which the rail rests and devices of various forms on the under side for engaging in the tie under pressure and preventing movement of the plate on the tie. One of these forms of tie engaging projections is a triangular rib, another rib in the form of a cross, and the third form consists of sharpened spurs or lugs projecting downward and engaging in the tie. The groove in the upper surface would serve both to lighten without detracting from strength and carry off water and sand. (Carter, P. R., Vol. I, pp. 354, 355.)

The Dunham Patent. Letters Patent No. 469,386, were issued to C. H. Dunham, February 23, 1892, for railroad tie plates. (P. R., Vol. III, pp. 1169-1171. (Complainant owned this patent.) The device as described and shown in the specifications was reproduced in Aluminum Models Ex. O-8 and O-9, and is as follows:

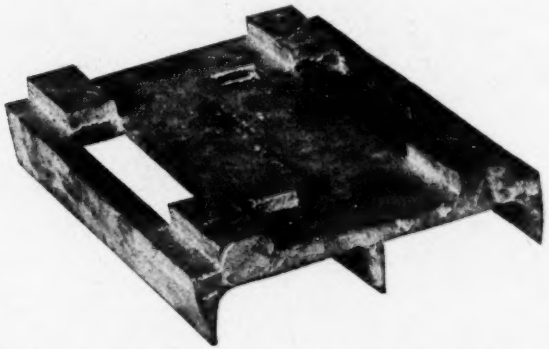


Reproductions of Aluminum Models (Ex. O-8 and O-9) of Railroad Tie Plate showing devices of Letters Patent, No. 469,386, dated February 23, 1892, to C. H. Dunham. (P. R., Vol. III, pp. 1169-71.)

This device is a very simple one and is described and illustrated in two forms, one of which is simply a doubly corrugated plate with ridges and channels on both upper and lower surface arranged parallel to the grain of the tie and at right angles to the rail and the other flat on one side, preferably, it is said on top, and with the other side corrugated. The grooves and flanges on the upper and lower surface are not made by being cut or gouged out but in rolling the plate. The effect would be, however, to lighten the plate, or to enable the rolling of a plate lighter than one which was flat on both sides. It is evident that the upper surface channels would allow the escape of foreign substances such as water, sand and grit. The upper ridges support the rail as bearings, and the lower ridges or flanges, especially those at the edge, to some extent press into or engage in the tie. Carter declares it possesses every characteristic of the

tie plate set out in claim eight of the Wolhaupter patent. (P. R., Vol. I, pp. 355, 356.)

The Reece Patent. Letters Patent No. 494,692 were on April 4, 1893, granted to B. Reece for methods of making railroad tie plates. (P. R., Vol. III, pp. 1196, 1197, 1198.) These Letters Patent show and describe a form of tie plate which was shown by an aluminum model, of which a reproduction is as follows:



Reproduction of Aluminum Model (Exhibit O-11) of Railroad Tie Plate, patented April 4, 1893, No. 494,692, to B. Reece. (P. R., Vol. III, pp. 1196-98.)

This tie plate shows and describes an upper surface, consisting of three bearings upon which the rail rests; the intermediate spaces or channels go clear through the plate to the tie instead of part way only. There are side shoulders to prevent lateral movement of the rails and underneath projecting sharpened flanges parallel to the grain of and engaging in the tie. The upper bearing surface and cavities or slots are at right angles to the rail. The result is a tie plate with an upper bearing surface consisting of separate rail supporting bearings, intermediate channels or slots, rail abutting shoulder flanges preventing lateral movement of the rail and

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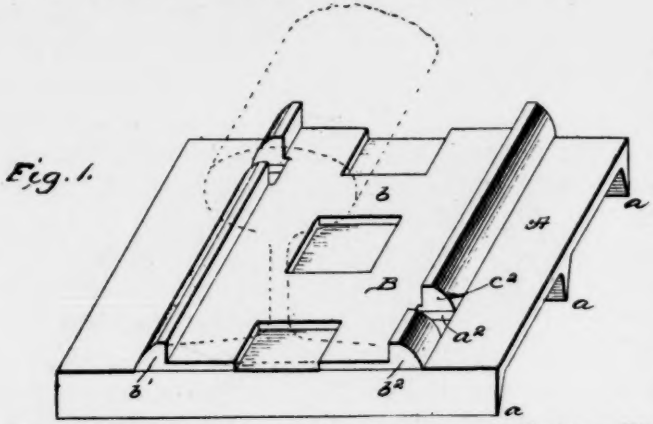
lower sharpened projections parallel to and beneath the rail bearing flanges engaging in the tie.

The Holmes Patent. In Letters Patent to W. W. Holmes, No. 514,465, dated February 13, 1894, for railway tie plates, the following form is shown in Fig. 1:



Reproduction of Fig. 1 from drawings in Letters Patent, No. 514,465, dated February 13, 1894, to W. W. Holmes for Railway Tie Plates. (P. R., Vol. III, pp. 1211-1213.)

This combination or double plate shows a lower plate with rail abutting side flanges, upper surface pockets and rail bearing flanges and lower tie engaging flanges parallel to the grain of the tie.

While the above are perhaps the most pertinent and applicable anticipations in patent specifications of the first Wolhaupter patent, there are a number of other tie plates and kindred devices shown in the record exhibiting, both separately and in union, upper rail bearing flanges and bottom tie engaging projections; flanged upper surfaces, tie engaging projections, and rail abutting shoulders; and upper side shoulders and tie engaging projections.

Of course, wherever there are upper surfaces, flanges or bearings, there are corresponding grooves or channels.

Additional devices shown in Letters Patent prior to the application for the first Wolhaupter patent, March 3, 1895, are as follows:

(1) *Rail bearing flanges.* Upper side rail supporting flanges and consequent grooves or channels shown in Letters Patent for "railway chairs" to J. Gregory, No. 93,875, dated August 17, 1869 (P. R., Vol. III, pp. 1071-74); and Letters Patent for "rail joint support," No. 164,776, to C. B. Sheldon, dated June 22, 1875 (P. R., Vol. III, pp. 1082, 1083); Letters Patent No. 185,808, for "railroad ties," dated December 26, 1876, to D. S. Whittenhall (P. R., Vol. III, pp. 1085-1086); Letters Patent for "rail joint" to C. Fisher, No. 360,673, dated April 5, 1887 (P. R., Vol. III, pp. 1120, 1122); Letters Patent to A. Cote, No. 387,399, dated August 7, 1888, for "railroad chair" (P. R., Vol. III, pp. 1128, 1129); Letters Patent for "construction of railroads," No. 388,240, dated August 21, 1888, to E. H. Ashcroft (P. R., Vol. III, pp. 1133, 1135); Letters Patent for "railroad tie plate," to W. H. Wilson, No. 522,867, dated July 10, 1894 (P. R., Vol. III, pp. 1229, 1230.)

(2) *Bottom tie engaging projections.* Devices, more or less sharpened adapted to penetrate and engage the tie are shown in Letters Patent for "tie plates for railway tracks" to J. A. Harris, No. 514,828, dated February 13, 1894 (P. R., Vol. III, pp. 1223, 1224); Letters Patent for "tie or wear plate" to R. Morrell, No. 531,637, dated Jan. 1, 1895 (P. R., Vol. III, pp. 1250-52); Letters Patent for "railroad tie plate," No. 457,584, dated August 11, 1891, to William Goldie (P. R., Vol. III, pp. 1145-47); Letters Patent No. 540,356, dated June 4, 1895, for "tie plate" (Goldie claw) to William Goldie

(P. R., Vol. III, pp. 1265-68); Letters Patent No. 492,528, dated February 28, 1893, for "wear plate" to J. Churchward (P. R., Vol. III, pp. 1192-94); Letters Patent No. 508,086, dated November 7, 1893, for "wear plate" to J. Churchward (P. R., Vol. III, pp. 1207-9); Letters Patent No. 379,210, dated March 13, 1888, for "wear plate" to J. W. Currier (P. R., Vol. III, pp. 1124-26); Reissue Letters Patent No. 10,302, dated April 3, 1883, for "wear plate" for railroad ties to D. Servis (P. R., Vol. III, pp. 1095-6); Letters Patent No. 495,-807, dated April 18, 1893, for "railway tie plate" to W. W. Holmes (P. R., Vol. III, pp. 1200-01); Letters Patent No. 506,963, dated October 17, 1893, for "method of making railroad tie plates" to W. W. Worthington (P. R., Vol. III, pp. 1203-5).

(3) *Flanged upper surfaces and tie engaging projections.* Tie plates exhibiting both an upper corrugated, flanged or ridged and channelled rail supporting surface and lower more or less sharpened tie engaging flanges or ribs in union, including those already examined in detail, are also shown by Letters Patent to J. L. Hudson, No. 142,020, for "railway rail joints," dated August 19, 1873 (P. R., Vol. III, pp. 1079-80); Letters Patent to I. Wells, No. 203,570, for "railway chair," dated May 14, 1878 (P. R., Vol. III, pp. 1088-90); Letters Patent No. 280,-030, dated June 26, 1883, for "railroad rail cushion and joints" to W. F. Gould (P. R., Vol. III, pp. 1098-1100); Letters Patent No. 462,399, dated November 3, 1891, for "lock rail joint" to P. C. Dockstader (P. R., Vol. III, pp. 1158-1164); Letters Patent No. 469,386, dated February 23, 1892, for "railroad tie plate" (P. R., Vol. III, pp. 1169-71) to C. H. Dunham (here the lower projections are rounded corrugations except at the sides); Letters Patent No. 485,030, dated October 25, 1892, for "tie plate" to W. Goldie (P. R., Vol. III, pp. 1182-84); Letters Patent

No. 514,465, dated February 13, 1894, for "railway tie plate" to W. W. Holmes (P. R., Vol. III, pp. 1211-13); and Letters Patent No. 522,867, dated July 10, 1894, for "railroad tie plate" to W. H. Wilson (P. R., Vol. III, pp. 1229-1230).

DEVICES DESCRIBED IN PRINTED PUBLICATIONS PRIOR TO MARCH 15TH, 1895.

Post Plate (*Railway Age*). In an article in the Railway Gazette, published September 30, 1887, are shown and described devices employed for tie plates in various railroads in Europe. (P. R., Vol. I, pp. 513, 514, 515; Defendant's Ex. "D.D.D.," P. R., Vol. III, pp. 961, 962; Aluminum Model Ex. O-24.) The following is a reproduction of the aluminum model:

Reproduction of Aluminum Model (Ex. O-24) of Figure 8 of devices shown in Railroad Gazette, Vol. 19, p. 630, dated September 30, 1887. (Exhibit D.D.D., Vol. III, p. 961.)

This shows a metallic tie plate with a side shoulder against which the rail abuts and an upper surface having three bearings on which the rail rests, two intermediate grooves underneath the rail, and three lower tie penetrating devices parallel to and underneath the upper rail bearing flanges for engaging in the tie. Upper side shoulders, upper bearings and grooves or channels and

lower tie penetrating devices are parallel to the rail and at right angles to the tie. The article itself states:

> "The groove shown in the upper surface was apparently adapted to lighten the plate, being taken out at a point where the metal was not needed." (P. R., Vol. I, pp. 512-515, 517-518.)

A separate German publication, also describing and illustrating the Post tie plate was published August 1, 1887, and was proved by complainant. (P. R., Vol. II, pp. 830-835.)

It is asserted that the grooves or channels are not shown to extend clear across the plate, but were mere pockets and are so indicated by dotted lines in the drawing. This is denied by Carter, defendant's expert, who says that the drawings and descriptions do not mean pockets but grooves. Certainly there is nothing in the article limiting the cavities to the pocket form but the word "groove" is used. (Carter, P. R., Vol. I, pp. 513-516; Carter, P. R., Vol. I, pp. 520, 523.)

The German publication Das Eisenbahn-Geleise. In a German publication styled Das Eisenbahn-Geleise of 1891, circulated in this country in 1892 (P. R., Vol. I, pp. 521, 522, 523), various devices are shown for insertion between the tie and rail to protect the former and keep the rail in position. These devices show upper side shoulders, upper surface rail bearing ridges and intermediate groove or channel. (Defendant's Exhibits K.K.K. and L.L.L., P. R. Vol. III, pp. 963, 964, 965; Aluminum Models O-26 and O-27.) Reproductions of these aluminum models are as follows:

Reproductions of Aluminum Models (Exs. O-26 and O-27) of cuts from Das Eisenbahn-Geleise, pages 661 and 662, published in 1891. (P. R., Vol. III, p. 965.)

These are flat bottomed tie plates or rail chairs, and show an upper rail abutting shoulder, a central groove or channel across the plate and side bearings on which the rail rests. Here again it is insisted that the cavity is a pocket instead of a complete transverse groove, but there is nothing to show such limitation either in the drawings or description and such is not the case in one instance at least. (P. R., Vol. III, pp. 963-966); copy of

publication (identified P. R., Vol. I, pp. 522, 523); drawings identified (P. R., Vol. I, pp. 523, 524); Defendant's Exhibit K.K.K. (P. R., Vol. III, p. 964). The second illustration is as follows:

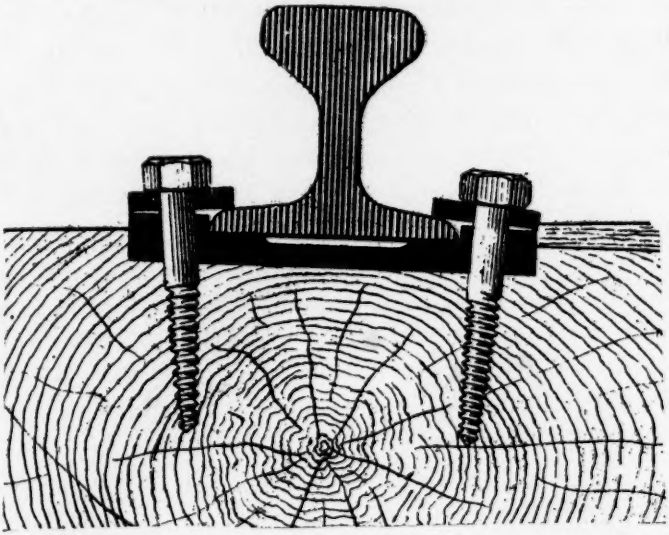


Illustration (second cut) reproduced from Das Eisenbahn Geleise, page 635, published in 1891. (Defendant's Exhibit K.K.K., Vol. III, p. 964.)

There are other pertinent descriptions of tie plates published prior to the application for the first Wolhaupter letters patent. The elastic tie plate was described and illustrated in the Railroad Gazette for March 8, 1889. It was a flat bottomed plate with concave upper surface and ends bent up alternately so as to form two upper rail shoulders (P. R., Vol. I, pp. 462, 463; Defendant's Exhibit E.E. (P. R., Vol. III, p. 955).

In the Railroad Gazette of April 5, 1889, was published an illustrated letter showing a tie plate with flat bottom slightly sloping flat top and upper side shoulders or lugs

for holding the rail in alignment (P. R., Vol. I, p. 462; Exhibit F.F., Vol. III, p. 958).

In the issue for June 6th, 1890, of the same publication is described a flat bottomed, flat topped, tie plate with an upper side rail abutting shoulder (P. R., Vol. I, p. 459, 460; Defendant's Exhibit A.A., P. R., Vol. III, p. 947).

In the Railroad Gazette, issued July 8th, 1892, is another Churchward tie plate with flat top, upper side rail abutting shoulder and lower tie engaging lugs or spurs (P. R., Vol. I, pp. 460, 461; Defendant's Exhibit C.C., Vol. III, pp. 951, 952).

The Railroad Gazette for August 5, 1892, shows and describes the C. A. C. tie plate. It is flat topped with upper side shoulders and lower tie engaging short ribs in double rail parallel alignment crosswise of the tie (P. R., Vol. I, pp. 463, 464; Defendant's Exhibit G.G., Vol. III, pp. 959, 960).

In the Railroad Gazette for November 11th, 1892, the Goldie ribbed tie plate, made by Dilworth, Porter & Co., is described; upper transverse cavity and lower flanges or ribs are described, but cut shows an upper flat surface (P. R., Vol. I, p. 461; Defendant's Exhibit D.D., Vol. III, p. 953).

An article in the Railroad Gazette and Northwestern Railroader, January 13, 1893, in describing a combined rail brace and tie plate says that the bottom is slightly concave (P. R., Vol. I, p. 465). The Servis combination tie plate described May 12, 1893, in the same publication is a tie with upper rail shoulder and lower tie engaging projections (P. R., Vol. I, p. 465, 466).

DEVICES IN ACTUAL USE.

The Goldie ribbed tie plates made by Dilworth, Porter & Co., of Pittsburgh, Pa., under letters patent No. 485,030 to William Goldie, dated October 25, 1892 (P. R., Vol. III, p. 1182), were placed on the market and sold or supplied to about 50 railroads in the period from 1892 to 1895 (Schleiter, P. R., Vol. II, pp. 819, 820; Goldie, P. R., Vol. II, pp. 801-806). Among these roads were the Old Colony Railroad; Atchison, Topeka & Santa Fe Railroad; Chicago, Burlington & Quincy Railroad; Chicago, Milwaukee & St. Paul Railroad; Chesapeake & Ohio Railroad, and Missouri Pacific Railroad. The Atchison, Topeka & Santa Fe Railroad Company in 1892 procured 1,000 of these Goldie ribbed tie plates with a depressed cavity in the top, two upper rail-bearing surfaces, side rail shoulders and lower tie engaging ribs, and having installed them in its track in that year, with one removal many of them were still in use in 1904 (Faulkner, P. R., Vol. I, pp. 210, 212; Elliott, Vol. I, pp. 247, 263; Dyer, P. R., Vol. I, pp. 434, 442; Goldie, P. R., Vol. II, p. 804; Schleiter, P. R., Vol. II, p. 819). (Brief, *supra.*) These Goldie ribbed tie plates were so satisfactory to the Santa Fe superintendent that he asked for more (Elliott, P. R., Vol. I, pp. 252, 253) and probably they were sent to the road (Goldie, P. R., Vol. II, p. 802). The Illinois Central Railway Company used the Servis flat top, lower flange running longitudinally with the tie plate, beginning about 1895 and since about 1891 has used the Servis plate and some of the Goldie, Wolhaupter, Beaver Dam and Sellers plates (Steinbeck, P. R., Vol. I, pp. 479, 480). The Chicago, Burlington & Quincy Railroad Company used the Servis and shoulder tie plates in 1891 and 1892; the Servis and Goldie tie plates in 1893 and

1894; the Servis, Goldie and Fox in 1895; the Servis, Goldie, C. A. C. and Wolhaupter in 1896; the Servis, C. A. C., Goldie and Wolhaupter in 1897 (Haynes, P. R., Vol. I, pp. 483, 484, 485). The same road also used the Glendon, which had longitudinal ribs and grooves on top, both parallel to the tie (Haynes, P. R., Vol. I, p. 485). The Chicago & Northwestern Railroad Company began the use of tie plates in 1899. They were Glendon and Goldie tie plates (Carroll, P. R., Vol. I, p. 501). The Pennsylvania Railroad Company used the Glendon flange from June 23, 1897, until January 21, 1899, then the Glendon rib until July 31, 1899, and subsequently the Richards (Zollinger, P. R., Vol. I, p. 505). The San Francisco & San Joaquin Valley Railroad adopted the Servis tie plate in 1895 and the Wolhaupter in 1900. Both were unsatisfactory and split the ties (Storey, P. R., Vol. I, 310, 312). The Southern Pacific Railroad Company, between 1890 and 1893, used the Sacramento plate, which is flat top, flat bottom with side shoulder (Storey, P. R., Vol. I, p. 308, 309). According to John H. Wallace the use of tie plates on the Southern Pacific System began in 1889 with the Sacramento plate, redesigned in 1891 and 1893, then the Servis plate, in 1891, then the Q. & W. and Wolhaupter in 1897 and 1898. These were unsatisfactory and reversion was had to the Sacramento plate, which was subsequently modified into the Harriman plate (Wallace, P. R., Vol. II, pp. 554, 555, 556-560).

PRIOR ART FOR SECOND WOLHAUPTER LETTERS PATENT.

The second Wolhaupter patent, No. 691,332 (application filed May 3, 1897, renewed November 9, 1901), dated January 14, 1902, claims a tie plate with upper rail bearing flanges united with lower tie engaging flanges and for these features combined with an upper side shoulder, construing the upper flanges extended as equivalent to a

rail receiving shoulder. Of course, all the anticipating devices specifically discussed and referred to as to the first Wolhaupter patent apply here. The union of upper side shoulder or shoulders, upper flanged surfaces with channels and tie engaging projections on the under side in a single device prior to May 3, 1897, in Letters Patent is shown by Letters Patent No. 142,020, August 19, 1873, to J. S. Hudson for "railway joints" (P. R., Vol. III, 1079-1080); by Letters Patent No. 203,570, dated May 14, 1878, for "railway chair" to I. Wells (P. R., Vol. III, 1088-1090); Letters Patent No. 280,030, dated June 26, 1883, for "railroad rail cushion and joint," to W. F. Gould (P. R., Vol. III, p. 1098); Letters Patent No. 462,-399, dated November 3, 1891, for "railroad rail brace," to P. C. Dockstader (P. R., Vol. III, 1158-1164); Letters Patent No. 485,030, dated October 25, 1892, for "tie plate," to W. Goldie (P. R., Vol. III, 1182-1184); Letters Patent No. 494,692, dated April 4, 1893, for "method of making railroad tie plates," to B. Reece (P. R., Vol. III, 1196-1198); (here the upper flanges are formed not by projections on the upper surface, but by cutting out portions and making slots therein); Letters Patent No. 514,465, dated February 13, 1894, for "railway tie plates," to W. W. Holmes (P. R., Vol. III, 1211-1213); Letters Patent No. 522,867, dated July 10, 1894, for "railroad tie plate," to W. H. Wilson (P. R., Vol. III, 1229-1230); Letters Patent No. 540,356, dated June 4, 1895, for "tie plate," to W. Goldie (P. R., Vol. III, 1265-1268).

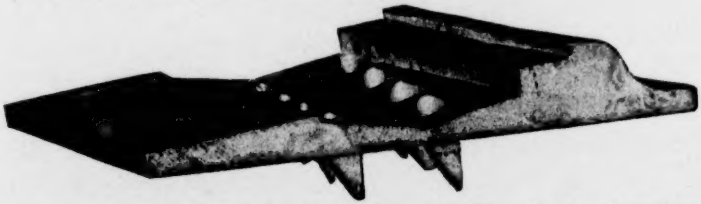
The Avery patent. Attention is particularly called in connection with the second Wolhaupter Letters Patent to Letters Patent No. 574,773, issued to H. W. Avery, for "railway tie plate," January 5, 1897 (P. R., Vol. III, pp. 1290, 1292; Aluminum Model, Defendant's Exhibit "O-6"). This device shows a tie plate consisting of a flat rectangular plate with three

rail bearing flanges on the upper surface above the plane of the plate at right angles to the rail and parallel to the tie and with two intervening cavities. This part of the device is called hollow transverse truss ribs. The specifications are filled with references to the fact that the rail bearing or truss ribs are above the plane of the rib. The channels, while extending the entire length of the ribs are interrupted by cross sections, thus making also rail bearings parallel to the rail. Lugs or raised projections at the diagonally opposite ends of the outside ribs act as rail abutting flanges to prevent lateral movement of the rail. Lower toothed or triangular sharpened projections enter the tie at right angles to its grain and parallel to the rail. These letters patent show every element in combination exhibited in the second and third Wolhaupter Letters Patent. Carter says the Avery device is a clear anticipation of the second and third Wolhaupter Letters Patent. (P. R., Vol. I, 414.)

Prior Wolhaupter patents. In addition it will be noted that the first Wolhaupter patent, No. 538,809, dated May 7, 1895, clearly shows upper surface rail bearing flanges, upper surface channels or grooves, lower tie penetrating devices, and a rail abutting upper flange produced by the upward extension of the sides of the rail supporting flanges above the level of the rail base. (P. R., Vol. I, 11-14; Aluminum Model "O"; Carter, P. R., Vol. I, 363, 364.) Claim eight, makes no effort to cover either the upper side shoulder separately or in combination and thus, even if the discoverer, abandoned the broad invention claimed to be covered in the second Wolhaupter patent.

Benjamin Wolhaupter also on October 19, 1896, filed an application upon which on March 23, 1897, Letters Patent for railway tie plates, No. 579,509, were issued. This

was five years prior to the issuance of the second Wolhaupter patent. (P. R., Vol. III, 1294-1296.) One of the forms shown has been reproduced as Aluminum Model (Ex. O-12) and is as follows:



Reproduction of Aluminum Model (Ex. O-12) showing device of Letters Patent, No. 579,509, issued March 23, 1897, to Benjamin Wolhaupter for railway tie plates. (P. R., Vol. III, pp. 1294-6.)

This device shows an upper side shoulder or flange, two side bearings upon which the rail base rests, an intermediate groove or channel extending between the rail supporting flanges and beneath the rail transversely of the tie and from side to side of the plate and lower tie engaging projections in the form of rows of bent down triangular spikes. No attempt is made to claim a tie plate possessing side shoulder, upper grooves or channels, upper rail supporting flanges and lower tie engaging projections or a combination of these features. The seven claims of the patent are of the most narrow and limited character. Carter says that this is a complete disclosure of all the features of the second Wolhaupter patent. (P. R., Vol. III, 1294-1296; Carter, P. R., Vol. I, 375, 376, 377.) The failure to make the claim for any one element or the elements in combination is a complete abandonment of the broad right and a limitation to the narrow fields for which claims were allowed.

James v. *Campbell,* 104 U. S., 356, 382.

Mahn v. *Harwood,* 112 U. S., 354, 361.

McCreary v. *Penn. Canal Co.*, 141 U. S., 459, 467.

Miller v. *Eagle Mfg. Co.*, 151 U. S., 186, 197.

Under the state of the art at the time of the application of the second Wolhaupter patent, and especially in view of prior Wolhaupter patents showing but failing to claim the union of elements shown therein, this patent, as sought to be construed, is therefore void, but the Circuit Court of Appeals for the Seventh Circuit, having found the first Wolhaupter patent valid, concluded, without any further investigation, that the claims of the second and third were also valid. This is not only an unwarranted conclusion, but on the basis of disclosures in prior Wolhaupter patents alone, erroneous. The first Wolhaupter patent and the Wolhaupter patent No. 579,509, March 23, 1897 (P. R., Vol. III, 1294-1296), are each a complete disclosure and anticipation of the claims of the second Wolhaupter patent. (Carter, Vol I, 375, 356, 357.)

PRIOR ART AS TO THE THIRD WOLHAUPTER PATENT.

The third Wolhaupter letters patent, No. 721,644, were issued on application filed March 31, 1902, issued on February 24, 1903, for a tie plate. (Exhibit "C" to bill of complaint; P. R., Vol. I, pp. 18, 21; Aluminum Model, Defts.' Ex. O-2, 222 Fed., 261, 267.)

The seventh and ninth claims are for a tie plate with transverse grooves or channels on the rail supporting surface and a transverse rail abutting shoulder on one side, the transverse grooves in the latter claim extending clear across the surface. (P. R., Vol. I, 21.)

While lower tie-engaging projections lengthwise of the tie are shown in the drawings and described in the specifications, there is no claim

for them either in combination or separately. Nor is there any claim separately or in combination for rail bearing flanges, but of course if there are channels or grooves, under the rail there must be corresponding flanges to support the rail. Rail abutting shoulders, frequently with and sometimes without channels or grooves, are shown in the following letters patent:

Letters patent to J. L. Hudson, No. 142,020, dated August 19, 1873, for railway rail joints (P. R., Vol. III, 1079-80); in letters patent No. 203,570, dated May 14, 1878, for "railway chairs," to I. Wells (P. R., Vol. III, 1088-90); letters patent No. 280,030, dated June 26, 1883, for "railroad rail cushion and joint," to W. F. Gould (P. R., Vol. III, 1098-1100); letters patent No. 379,210, dated March 13, 1888, for "wear-plate" to J. W. Currier (P. R., Vol. III, 1124-26); letters patent No. 457,584, dated August 11, 1891, "railroad tie plate" to W. Goldie (P. R., Vol. III, 1145-48); letters patent No. 457,585, dated August 11, 1891, for "railroad rail brace," to W. Goldie (P. R., Vol. III, 1149-52); letters patent No. 462,399, dated November 3, 1891, for "lock rail joint," to P. C. Dockstader (P. R., Vol. III, 1158-64); letters patent No. 465,492, dated December 22, 1891, for "railway chair" to F. W. Parsons (P. R., Vol. III, 1166-7); letters patent No. 474,129, dated May 3, 1891, for "rail joint" to F. H. Heath (P. R., Vol. III, 1173, 78); letters patent No. 485,030, dated October 25, 1892, for "tie plate" to W. Goldie (P. R., Vol. III, 1182-85); letters patent No. 488,662, dated December 27, 1892, for "wear plate for railway ties" to B. Reece (P. R., Vol. III, 1187-90); letters patent No. 492,528, dated February 28, 1893, for "wear-plate" to J. Churchward (P. R., Vol. III, 1192-94); letters patent No. 494,692, dated April 4, 1893, for "method of making railroad tie plates," to B. Reece (P. R., Vol. III, 1196, 98); letters patent No. 495,807, dated April 18,

1893, for "railway tie plate" to W. W. Holmes (P. R., Vol. 111, 1200-1); letters patent No. 506,963, dated October 17, 1893, for "method of making railroad tie plates" to W. W. Worthington (P. R., Vol. III, 1203-5); letters patent No. 508,086, dated November 7, 1893, for "wear plate" to J. Churchward (P. R., Vol. III, 1207-9); letters patent No. 514,465, dated February 13, 1894, for "railway tie plate" to W. W. Holmes (P. R., Vol. III, 1211-13); letters patent No. 514,828, dated February 13, 1894, for "tie plate for railway tracks," to J. A. Harris (P. R., Vol. III, 1223,27); letters patent No. 522,867, dated July 10, 1894, for "railroad tie plate" to W. H. Wilson (P. R., Vol. III, 1229-30); letters patent No. 524,868, dated August 21, 1894, for "railway tie plate" to D. Servis (P. R., Vol. III, 1232-34); letters patent No. 529,-854, dated November 27, 1894, for tie plate to S. F. Clark (P. R., Vol. III, 1236-38); letters patent No. 531,637, dated January 1, 1895, for "tie or wear plate," to R. Morrell (P. R., Vol. III, 1250,52); letters patent No. 535,963, dated March 19, 1895, for "railway tie plate," to J. R. Stewart (P. R., Vol. III, 1254-56); letters patent No. 538,817, dated May 7, 1895, for "tie plate" to W. H. Chamberlain (P. R., Vol. III, 1261-63); letters patent No. 540,356, dated June 4, 1895, for "tie plate" to W. Goldie (P. R., Vol. III, 1265-68); letters patent No. 566,828, dated September 24, 1896, for "tie guard or plate" to T. S. Weed (P. R., Vol. III, 1282-84); letters patent No. 573,543, dated December 22, 1896, for "tie plate" to M. Sellers (P. R., Vol. III, 1286-88); letters patent No. 574,-773, dated January 5, 1897, for "railway tie plate," to H. W. Avery (P. R., Vol. III, 1290-92); letters patent No. 584,603, dated June 15, 1897, for "railroad chair or tie plate" to J. T. Richards (P. R., Vol. III, 1302, 3); letters patent No. 356,760, dated February 1, 1887, for "railway chair or fastening" to W. Goldie (P. R., Vol,

III, 1116-18). See Carter's comments on many of these devices as anticipations (P. R., Vol. I, 379, 408, 424). In addition to the prior letters patent discussed in detail, attention should be given to letters patent to R. B. Charlton No. 649,299 (application April 17, 1899), dated May 15, 1900 (P. R., Vol. III, pp. 1342-1344), which show an upper side rail-abutting flange, upper surface groove at right angles to the rail and parallel to the tie and lower tie-engaging spurs. Carter says of these letters patent that they have grooved upper or rail-supporting surfaces to gather therein the sand that accumulates on the top of the plate they answer in substance to the claims of any of the Wolhaupter patents in issue, in any view of those claims that would include defendant's tie plate within their definitions (P. R., Vol. I, p. 414). It must also be kept in mind that all the descriptions in the Railroad Gazette and Das Eisenbahn Geleise antedated and described the general features of both the second and third Wolhaupter letters patent in suit and are pertinent. (P. R., Vol. I, 459-466.) (Carter, Vol. I, 517, 521.) Defendants' Exhibits AA, BB, CC, DD, EE, FF, GG and DDD, Vol. III, 947-963, P. R., Vol. I, 521, Exhibits KKK and LLL, Vol. III, 963-965), (Brief, *supra*, 53-57).

The prior Wolhaupter patents showing without claiming upper side shoulders and channels in the rail-bearing surfaces, completely anticipate these two claims in the third Wolhaupter letters patent.

Letters patent to Wolhaupter May 7, 1895, No. 538,809, show and describe upper side shoulders, upper side channels and flanges (P. R., Vol. I, 11-14), but do not claim them either separately or in combination.

Letters patent to Benjamin Wolhaupter, application made May 3, 1897, patent January 14, 1902, No. 691,332

show upper side shoulders, upper channels and flanges, but do not claim the same either separately or in combination. (P. R., Vol. I, 15-17.)

Letters patent to Benjamin Wolhaupter, No. 579,509, March 23, 1897 (Vol. III, 1294), show upper side shoulder or flange to prevent lateral movement of the rail, a continuous cavity and channel or depression across the plate underneath the rail, but do not claim the same. If there be any claim for invention in changing the direction of the channel and shoulder, which are parallel to the tie and at right angles to the rail in the first Wolhaupter patent, this is completely met by the fact that in the last named Wolhaupter patent both shoulder and channel are parallel to the rail and at right angles to the tie.

Wolhaupter also took out letters patent for tie plates with upper side shoulders and flat surface, No. 538,808, May 7, 1895 (P. R., Vol. III, 1258, 1259), and claimed the upper side shoulders and lower tie-penetrating flanges in combination with very strict additional limitations on the combination.

Again on application filed May 11, 1899, Wolhaupter on January 14, 1902, as No. 691,037, patented a rail joint, the separate base or plate for which showed the upper side abutting shoulder and a rail bearing surface with channels or grooves extending transversely across the plate. (P. R., Vol. III, 1354-1361.) (Note especially Figures 10, 11, 12, P. R., Vol. III, 1356, Aluminum Model, Defendant's Exhibit O-14.) Claim 20 of this patent claims a base plate for rail joints with longitudinal parallel grooves and ribs on the top and bottom surfaces from end to end thereof, and at one side of its top surface a longitudinal shoulder for contact with the edges of the rail flanges and spike holes on the opposite side. (P. R., Vol. III, 1361.)

Thus Wolhaupter himself in three letters patent for tie plates, applied for and granted prior to the application for the third Wolhaupter patent, clearly showed and described a tie plate with upper side rail abutting shoulders and channeled rail bearing surface, and in each instance wholly failed to claim either element separately or in combination, and in specifications for another letters patent exhibited a tie plate device, inserted as part of a rail joint between the rail and tie, practically identical in structure with the third Wolhaupter device. It had a side abutting shoulder, rail bearing surfaces parallel to the rail, upper surface grooves and a tie-engaging device below, all parallel to the rail. This base plate performed all the functions of a tie plate.

A comparison of defendant's Aluminum Models "O" (Wolhaupter 538,809), "O-1" (Wolhaupter 691,332), "O-13" (Wolhaupter 579,509), "O-14" and "O-15" (Wolhaupter 691,037), with "O-13" (Wolhaupter 721,644) shows, so far as the upper surface of the plate is concerned, side abutting shoulders and grooves or channels across the plate, longitudinal to the plate and across the rail, in the first two instances, but transverse to the plate and parallel to the rail in the second.

Effect of letters patent and Publications as anticipations of subsequent letters patent. In considering the letters patent and descriptions shown as anticipations of the Wolhaupter patents, it must be kept in mind that this is not a question of priority of invention but a question of anticipation and hence descriptions, specifications and drawings and not actual reduction to practice are alone to be considered.

Peters v. *Active Co.*, 129 U. S., 530, 537.
Kelly v. *Springfield Co.*, 92 Fed., 614, 620.
National C. & F. Co. v. *Swift & Co.*, 104 Fed., 87, 91.

Van Epps v. *United Box Board Co.*, 143 Fed., 869, 874.

Westinghouse Air B. Co. v. *Christensen Eng. Co.*, 128 Fed., 437, 442.

And it is distinctly ruled that prior devices described in letters patent, though not used practically and needing alterations to adapt them to practical use are anticipations.

Dashiell v. *Grosvenor*, 162 U. S., 425, 432.

Brown v. *District of Columbia*, 130 U. S., 87, 99.

Shenfield v. *Nashawannuck Co.*, 137 U. S., 56, 59.

Pickering v. *McCullough*, 104 U. S., 310, 319.

French v. *Carter*, 137 U. S., 239, 244.

Howard v. *Detroit Stove Wks.*, 150 U. S., 164, 166.

Schweichler v. *Levinson*, 147 Fed., 704, 708.

Watrous Manf. Co. v. *Am. Hardware Co.*, 161 Fed., 362, 364.

The effect of prior art in considering what is invention and the application of the authorities is well set out in *Positive Lock Washer Co.* v. *Reliance Mfg. Co.*, 214 Fed., 134, 136, citing as especially pertinent *Strom Mfg. Co.* v. *Weir Frog Co.* (27 C. C. A., 502), 83 Fed., 170, 172, where a rail brace manufacture patent was held invalid. The effect of paper patents in this connection is thus stated in a recent decision, *Hyde* v. *Minerals Separation, Ltd.* (130 C. C. A., 576, 214 Fed., 100, 105):

> "But the appellees say that the Froment patent is a paper patent, and that therefore it is to be disregarded. A paper patent, if it fully describes an invention, whether it be a machine, device, or process, is just as effective to show anticipation as a patent which describes an invention which has gone into extensive use, for a presumption of operativeness and of some utility attends the granting of Let-

ters Patent. *Packard* v. *Lacing Stud Co.*, 70 Fed., 66, 16 C. C. A., 639; *E. L. Watrous Mfg. Co.* v. *American Hardware Mfg. Co.* (C. C.), 161 Fed., 362; *National Chemical & Fertilizer Co.* v. *Swift & Co.*, 104 Fed., 87, 91 (43 C. C. A., 421); *Universal Winding Co.* v. *Willimantic Linen Co.*, 82 Fed., 228; *Van Epps* v. *United Box Board & Paper Co.*, 143 Fed., 869 (75 C. C. A., 77); *Ironclad Mfg. Co.* v. *Dairyman's Mfg. Co.*, 143 Fed., 512, 515 (74 C. C. A., 372); *Dashiell* v. *Grosvenor*, 162 U. S., 425, 432, 16 Sup. Ct., 805, 40 L. Ed., 1025. In Telephone Cases, 126 U. S., 1, 536, 8 Sup. Ct., 778, 783 (31 L. Ed., 863), it was said:

'The law does not require that a discoverer or inventor, in order to get a patent for a process, must have succeeded in bringing his art to the highest degree of perfection. It is enough if he describes his method with sufficient clearness and precision to enable those skilled in the matter to understand what the process is, and if he points out some practicable way of putting it into operation.'"

Under the state of the art and the facts relating to tie plates prior to each one of the Wolhaupter applications, even if corrugating or channeling the top surface is to be regarded, if original, as invention, the claims in question are absolutely void. Among the almost innumerable decisions pertinent to the question are the following in which letters patent were held void for lack of anticipation and want of novelty:

(Corded fabric.) *Smith* v. *Nichols*, 21 Wallace, 112, 119.

(Return flue steam boiler for straw burning engine.) *Heald* v. *Rice*, 104 U. S., 737, 754, 755.

(Fuel Magazine for fireplace heater.) *Thatcher Heating Co.* v. *Burtis*, 121 U. S., 286, 294, 295.

(Device for operating street car door.) *Stephenson* v. *Ry. Co.*, 114 U. S., 149, 156.

(Aging wine by steam in pipes.) *Dreyfus* v. *Searle* 124 U. S., 60, 63.

(Railway frogs for switches.) *Weir* v. *Morden,* 125 U. S., 98, 108.

(Grain car doors.) *Watson* v. *Cincinnati, Indianapolis, etc., Ry. Co.,* 132 U. S., 161, 167.

(Improvement in shoes.) *Burt* v. *Evory,* 133 U. S., 349, 358.

(Corsets.) *Florsheim* v. *Schilling,* 137 U. S., 64, 76, 77.

(Grating for prison doors.) *Fond du Lac County* v. *May,* 137 U. S., 395, 406, 407.

(Substitution of belts and pulleys in place of shafts and cog gears for grinding rolls.) *Consolidated Roller Mill Co.* v. *Walker,* 138 U. S., 124, 131, 132.

(Cushioning bicycle pedals with rubber.) *Pope Mfg. Co.* v. *Gormully Mfg. Co.,* 144 U. S., 238, 247, 248.

(Insulating electric conductors.) *Ansonia Brass Co.* v. *Electric Supply Co.,* 144 U. S., 11, 17-19.

(Device for reeling and winding thread.) *Grant* v. *Walter,* 148 U. S., 547, 553.

(Process for cooling and drawing beer.) *Magin* v. *Karle,* 150 U. S., 387, 391, 392.

(Trough and cylindrical guide for stationary engine rods and cross-heads.) *Wright* v. *Yuengling,* 155 U. S., 47, 53, 54.

(Oil cup for axle.) *Market Street Ry.* v. *Rowley,* 155 U. S., 621, 629.

(Sewer gratings.) *Palmer* v. *Corning,* 156 U. S., 342, 343, 344.

(Windmill.) *Mast, Foos & Co.* v. *Stover Mfg. Co.,* 177 U. S., 485, 492.

For decisions of lower courts applying these principles, see *Note* 3.

Note 3. (Map case.) *Olmstead* v. *Andrews & Co.* (23 C. C. A., 488), 77 Fed., 835, 839, 840.

(Faucet-bushing.) *West Coast Safety Co.* v. *Jackson Co.* (54 C. C. A., 533), 117 Fed., 295, 298.

(Collared cylindrical coupling pin in recess.) *Bradley* v. *Eccles* (74 C. C. A., 478), 143 Fed., 521, 522.

(6) *Alleged public use and recognition of Wolhaupter plates.*

The lower court found that the utility of the invention

(Fireproof window.) *Voightmann* v. *Weis & R. Cornice Co.* (78 C. C. A., 538), 148 Fed., 848, 851.

(Flanged handle for type block.) *Kuhn* v. *Lock-Stub Check Co.* (91 C. C. A., 389), 165 Fed., 445, 446.

(Pyrographic tool with small hole nozzle.) *Tyssowski* v. *Thayer* (98 C. C. A., 29), 174 Fed., 43, 45.

(Thermostatic valve in suction system pipe.) *Warren Webster & Co.* v. *Dunham Co.* (104 C. C. A., 346), 181 Fed., 836, 838, 839.

(Miner's lamp.) *Anton* v. *Grier Bros. Co.* (108 C. C. A., 173), 185 Fed., 796, 797, 798.

(Railway Motor Vehicles.) *Sheffield Car Co.* v. *Buda Foundry & Mfg. Co.* (109 C. C. A., 646), 187 Fed., 847, 850.

(Regulators for alternating current systems.) *General Electric Co.* v. *Winona Interurban Co.* (110 C. C. A., 148), 188 Fed., 77, 81.

(Lifting springs for shift key in typewriter.) *Underwood Typewriter Co.* v. *Victor Typewriter Co.* (110 C. C. A., 152), 188 Fed., 82, 85.

(Live Stock car with supply devices.) *Ryan Car Co.* v. *Live Poultry Transportation Co.* (115 C. C. A., 435), 195 Fed., 525, 527.

(Fireproof window.) *Voightmann* v. *Seely* (119 C. C. A., 386), 198 Fed., 485, 487.

(Secret society initiation apparatus.) *Alexander* v. *De Moulin Bros. & Co.* (117 C. C. A., 627), 199 Fed., 145, 147.

(Carton for packing biscuits.) *Peters* v. *Chicago Biscuit Co.*, 200 Fed., 774, 777 (132 C. C. A., 134), 215 Fed., 442, 446.

(Staple puller with corrugated grip.) *Utica Drop Forge & Tool Co.* v. *C. E. Bonner Mfg. Co.*, 201 Fed., 924, 925.

(Compression brass coupling.) *Imperial Brass Co.* v. *Nelson* (121 C. C. A., 606), 203 Fed., 484, 490.

(Burial casket with mounted gauze sheet.) *National Casket Co.* v. *Stolts* (123 C. C. A., 305), 204 Fed., 983, 984, also (85 C. C. A., 300), 157 Fed., 392.

(Billiard table.) *Brunswick-Balke-Collender Co.* v. *Charles Passow & Sons*, 206 Fed., 468, 473.

(Detachable bracket lamp.) *Rose Mfg. Co.* v. *Whitehouse Mfg. Co.* (126 C. C. A., 566), 208 Fed., 564, 565.

(Corrugated Metallic culvert.) *Stillwell* v. *McPherson*, 207 Fed., 837, 846.

(Bevelling dumping gratings.) *McClave-Brooks Co.* v. *M. H. Treadwell Co.*, 212 Fed., 442, 446.

(Elongated studs on vehicle wheels.) *Republic Rubber Co.* v. *Tire Co.* (129 C. C. A., 26), 212 Fed., 170, 172.

(Superimposed engine in hoisting apparatus.) *Mead, etc., Co.* v. *Exeter Co.*, 215 Fed., 731, 735.

(Hame and trace connector.) *Star Hame Mfg. Co.* v. *U. S. Star-Hame Co.* (142 C. C. A., 400), 227 Fed., 876, 883.

(Street railroad cross-over.) *Belsteel Co.* v. *Lorain Steel Co.* (142 C C. A., 30), 227 Fed., 240, 242.

(Signal lamp.) *Adams & Westlake Co.* v. *Peter Gray & Sons*, 206 Fed. 303; 218 Fed., 173, 175.

(Folding eye glasses.) *Hutten* v. *Frank Krementz Co.*, (C. C. A.) 231 Fed., 973, 979.

(Carburetor.) *Locomobile Co.* v. *Parkin* (C. C. A.), 231 Fed., 980 984.

(Leather skiving machine.) *Apple* v. *American S. & T. Co.* (C. C. A.) 232 Fed., 603, 606.

was demonstrated by the instant and growing demand for the Wolhaupter plates. (*Railroad Supply Co.* v. *Hart Steel Co.*, 222 Fed., 268.) (P. R., Vol. III, p. 1415.) This conclusion is directly contrary to the evidence in the case.

It is not asserted that complainant ever manufactured any Wolhaupter tie plate of the forms shown and described in the Wolhaupter letters patent. The aluminum models of defendants were the first specimens of the various forms of Wolhaupter patented tie plates that were ever made. Positive evidence also supports this conclusion. E. O. Faulkner, the Santa Fe expert, who made an elaborate investigation of tie plates in 1904, never saw a tie plate in actual use like Exhibit "O" or the drawings of the first Wolhaupter patent. (P. R., Vol. I, 220.) The Wolhaupter tie plates observed by W. B. Storey, Jr., were very similar to the Servis patents, had no shoulders on the upper surface and were not stepped or diagonalized on the ends. (P. R., Vol. I, p. 312.) Complainant's witnesses identified the plates actually made. (Exhibit No. 24, P. R., Vol. I, p. 83; improved Wolhaupter, Vol. II, p. 905; new Wolhaupter, Vol. II, p. 907; Q. & W., P. R., 909; Servis P. R., Vol. II, 911.) No one of these were stepped or had a side shoulder. Afterwards an upper side shoulder was adopted and made. (Exhibit No. 22, P. R., Vol. II, pp. 927, 929, 931.) Even these forms were not put on the market to any extent until 1899 or 1900. The Wolhaupter plate, without upper shoulder was used until 1904. (P. R., Vol. I, 98, 176.) The early commercial form of the Wolhaupter tie plate had no top shoulder and had the upper corrugations and lower tie engaging flanges parallel to the tie. (Wallace, P. R., Vol. II, 565, 572.) Exhibit No. 23 shows the form used. (Wallace, P. R., Vol. II, p. 584.) The number of tie plates made by complainant is set

out in the testimony. It grew from 300,000 plates in 1895 to 24,000,000 annually in 1909. (P. R., Vol. I, p. 43.) But the Railroad Supply Company is a consolidation of a number of other railroad companies and the statistics cover the consolidated output. (P. R., Vol. I, p. 43.) Out of 188,000,000 tie plates, the total output of the Railroad Supply Company, 77 per cent. were of the corrugated top type. But this includes Q. & W. (P. R., Vol. II, p. 909), Harriman plates (P. R., Vol. II, p. 919), and all the plates of the Harriman type and Storey type made for the Atchison, Topeka & Santa Fe Ry. Co. This Harriman type of plate was gotten up by the Southern Pacific engineers. The Storey plate alleged to infringe was gotten up by Faulkner and Storey. If the statistics show anything, it is the phenominal increase in the sales of the Harriman plate of which 38,000,000 have been sold since it was devised in 1904, and with which form Wolhaupter had nothing to do. (P. R., Vol. II, p. 873.) The Q. & C. Co. began selling tie plates in 1890 and sold 341,000. In 1896 it sold 7,361,000, and all these were flat top plates. The practical demand for tie plates began in 1890 and has been increasing ever since, owing to the use of soft wood ties, advance in train speed and increase in weights of locomotives and cars. (Wolhaupter, P. R., Vol. I, pp. 162, 163; Faulkner, P. R., Vol. I, pp. 232, 239; Storey, P. R., Vol. I, pp. 308, 309, 320; Wallace, Vol. II, pp. 554, 568; Bell, Vol. I, p. 117.)

The Railroad Supply Company has tie plates manufactured at a number of different mills of high reputation for quality and maintains a very extensive system of salesmen, investigation, exploitation and advertisement. Undoubtedly, these methods have more to do with the extensive sales than any top corrugation or Wolhaupter inventive genius. (Hawley, P. R., Vol. I, pp. 44, 45; Bell, P. R., Vol. I, p. 85.) But it is not true that the

Wolhaupter tie plate even in the forms manufactured met with universal recognition and adoption. It was condemned by many railroads that used it and many absolutely refused to put it in track. In 1894, the Atchison, Topeka & Santa Fe Ry. Co. and Southern Pacific Ry. System were so dissatisfied with the Wolhaupter plates which they had employed to an extent sufficient to give a fair test, that the Wolhaupter plates were abandoned and plates of the Harriman type, that is either with flat bottoms or with lower tie engaging ribs parallel to the rail and crosswise the tie were adopted. Faulkner, Storey, Isaacs, Wallace and Kruttschnitt who were the experts and officials chiefly concerned in this branch of railroad construction, condemned the Wolhaupter plates saying that they were not satisfactory and did not perform the functions required, buckled and broke. (Faulkner, P. R., Vol. I, pp. 201, 202, 215; Storey, P. R., Vol. I, pp. 310, 311, 312; Isaacs, P. R., Vol. I, pp. 450, 468; Wallace, P. R., Vol. II, pp. 564, 565, 572, 573.)

Elliott and Dyer, Road Master and Division Superintendent of the Santa Fe Ry. Company and wholly disinterested, condemned the Wolhaupter plates, saying that they went to pieces, broke, split the ties and caused them to rot and did not hold the rail in alignment. (Elliott, P. R., Vol. I, pp. 251, 252; Dyer, P. R., Vol. I, pp. 268, 269.)

E. J. Steinbeck, Assistant Engineer of the Illinois Central Railroad, after some experience with the Wolhaupter plate, discarded it because he considered it destructive to ties. (Steinbeck, P. R., Vol. I, pp. 479, 480, 481.)

Joseph R. Haynes, Assistant Purchasing Agent of the C. B. & Q. Railroad System, produced statistics showing that while the Wolhaupter plates were purchased by

his company in small quantities from 1896 to 1901, they were used in a very limited way and had been practically discarded. (Haynes, P. R., Vol. I, pp. 483-485.)

John M. McCarthy, Purchasing Agent of the Chicago, Rock Island & Pacific Railway System, said that the standard on that system was a flat bottom plate and not the Wolhaupter. (McCarthy, P. R., Vol. I, p. 498.)

George L. Mansfield, Mechanical Engineer for the Chicago & Alton Road, deposed that the Sellers' tie plate had been the standard on that system for four years and that after using a few Wolhaupter, Glendon and Servis tie plates, all flanged, the Wolhaupter tie plates were abandoned because the flanges were too thick and caused the ties to rot. (Mansfield, P. R., Vol., I, pp. 500, 501.)

Lester S. Carroll, Purchasing Agent of the Chicago & North Western Railway Co., showed that the Wolhaupter plates had been used only to a limited extent on that system. (Carroll, P. R., Vol. I, pp. 501, 502.)

L. R. Zollinger, Engineer of the Pennsylvania System, by letter, stipulated as a substitute for a deposition, showed that the Pennsylvania form of tie plate is a flat top without projections on the bottom and that it had formerly used the Glendon. So far as the evidence goes the Pennsylvania System never used the Wolhaupter plate in any form. (Zollinger, P. R., Vol. I, p. 505.)

W. Hunter, Chief Engineer of the Philadelphia & Reading Railroad System, stated that no Wolhaupter plates were in use on that road and that the form employed was a flat top plate without projections on the bottom. (Hunter, P. R., Vol. I, pp. 505, 506.)

W. L. Darling, Engineer of the Northern Pacific Railway System, a user of tie plates for 15 or 20 years, stated that the present standard was a flat bottom, flat top, side

shoulder plate, entirely distinct from the Wolhaupter form. (Darling, P. R., Vol. I, p. 506.)

W. A. Wallace, Engineer of the Monon Road, testified that after use and test in 1906 of the Wolhaupter tie plates that road abandoned and took them out of track, substituting the Goldie plate because the Wolhaupter plates were not satisfactory. (Wallace, P. R., Vol. I, pp. 507, 508, 510, 511.)

Benjamin T. Jellisson, of the Chesapeake & Ohio Railway Co., it was stipulated, would testify that the standard on that System was a flat top, side shoulder plate with lower tie engaging ribs, and not the Wolhaupter form. (Jellisson, P. R., Vol. I, p. 515.)

The testimony of E. J. Powell, Purchasing Agent for the Chicago & Eastern Illinois Railway Co., was that the standard plate on that road adopted in 1906 was a flat bottom, flat top shoulder plate much like the Sacramento plate and certainly not a Wolhaupter tie plate. (Powell, P. R., Vol. I, p. 515.)

It was stipulated that A. W. Thompson, Chief Engineer Maintenance of Way, of the Baltimore & Ohio Railroad Co., would testify that the System used Goldie, Sellers, McKee, Wolhaupter, Glendon and Economy plates, but that the Wolhaupter plate was used only to a small extent. (Thompson, P. R., Vol. I, p. 516.)

By the testimony of the representatives and officials of the Spencer Otis Company, Elyria Iron & Steel Company, Sellers Manufacturing Company and the Beaver Dam Malleable Iron Company and the identified catalogues of these concerns, it appears that each company is producing from ten to twenty thousand tons of tie plates per year of forms variant from the Wolhaupter and are supplying such roads as the Lehigh Valley, Seaboard Air Line, Big Four, New York Central Lines,

G. R. & I. Chicago, Rock Island & Pacific, Illinois Central, Chicago & North Western, Chicago, Milwaukee & St. Paul, and Chicago, Burlington & Quincy Railroad with such plates. (Blatchford, P. R., Vol. I, pp. 470-472; catalogue, Vol. III, pp. 992-1093; McKee, P. R., Vol. I, pp. 489, 490; catalogue, Vol. III, 1009-1051; Markham, P. R., Vol. I, p. 500; Cowling, P. R., Vol. I, pp. 447, 448; catalogue, Vol. III, pp. 969-988.)

It is also a fact that not only has complainant absolutely failed to manufacture, market or commend the use of any tie plate identical in form with the devices disclosed in its letters patent, but that it has diverged in actual manufacture more and more from even the forms *styled* Wolhaupter, and that its success as a tie plate manufacturer has been exactly commensurate with the degree to which it has abandoned the Wolhaupter ideas and adopted forms approved by the practical experience of railroad engineers, such as Faulkner, Storey, Isaacs and Wallace. The evidence refutes completely the assertion of wide public recognition and use due to any Wolhaupter inventive element, and as lack of patentable combination, lack of novelty and invention and clear anticipation have been shown, both as a matter of fact and law, the application of the rule of public recognition as indicative of patentable invention cannot be made. This rule is clearly established in this court in the following cases:

McClain v. *Ortmayer,* 141 U. S., 419, 428.
Adams v. *Bellaire St. Co.,* 141 U. S., 539, 542.
Manufacturing Co. v. *Cary,* 147 U. S., 623, 635.
Grant v. *Walter,* 148 U. S., 547, 556.
Duer v. *Corbin Cab. L. Co.,* 149 U. S., 216, 223.

Lower court decisions applying the rule are:
Saunders v. *Allen,* 60 Fed., 610, 612.

Dalby v. *Lynes*, 64 Fed., 376, 381.
Codman v. *Amia*, 74 Fed., 634, 636.
Dueber Watch-Case Co. v. *Robbins*, 75 Fed., 17, 26.
Klein v. *Seattle*, 77 Fed., 200, 204.
Lane v. *Welds*, 99 Fed., 286, 292.
Standard C. & W. Co. v. *Caster S. Co.* (51 C. C. A., 109), 113 Fed., 162, 166.
Am. Sales Book Co. v. *Bullivant* (54 C. C. A., 287), 117 Fed., 255, 259.
Union Bis. Co. v. *Peters*, 125 Fed., 601, 609.
Voightmann v. *Weis & Ridge Cornice Co.*, 133 Fed., 298, 304; 148 Fed., 848, 853.
Hotel Co. v. *Lorraine Co.*, 155 Fed., 298, 301.
Tubelt Co. v. *Friedman*, 158 Fed., 430, 440.
Fellows v. *Bordens' Con. M. Co.*, 180 F. R., 421, 439.
Boss Mfg. Co. v. *Thomas* (105 C. C. A. 243), 182 F. R., 811, 814.
Hyde v. *Minerals Separation, Ltd.* (130 C. C. A., 576), 214 Fed., 100, 108.
Outlook Envelope Co. v. *Sherman Envelope Co.* (132 C. C. A., 575), 216 Fed., 754, 755.
Autosales Gum & Chocolate Co. v. *Caille Bros. Co.*, 224 Fed., 473, 476.
Star-Hame Mfg. Co. v. *U. S. Hame Co.* (142 C. C. A., 400), 227 Fed., 876, 883.
Keene v. *New Idea Spreader Co.*, 231 Fed., 701, 710.
Apple v. *American Shoe Machinery & Tool Co.*, 232 Fed., 603, 605.

It therefore results that there was shown in the Wolhaupter patents no patentable combination and no novelty or patentable invention and that there ensued no

commercial use of the Wolhaupter forms or commercial success of complainant's actual manufacture due to any suggestion by Wolhaupter either in letters patent or personally and that the claims asserted to be infringed when construed broadly are void.

V.

THERE IS NO INFRINGEMENT.

It is, of course, the basis of the claim for infringement in the present case that defendants' device (P. R. Vol. I, p. 22, Exhibit "D" to bill of complaint, Complainant's Exhibit 15) infringes each one of the Wolhaupter claims specified. This device of defendants is a flat metallic plate with upper side shoulders which engage the rail flange and prevent spreading of the rail, with rail bearing surfaces separated by two transverse channels or grooves into three rail supporting bearings and also having two lower projecting ribs for engaging the tie. Shoulders, bearing flanges, channels or grooves and tie engaging ribs are all crosswise of the tie and parallel of the rail. The first and second Wolhaupter patents show tie plates with flanges, upper rail grooves and lower tie engaging flanges parallel to the grain of the tie and at right angles to the rail and in the third Wolhaupter patent the upper side shoulders, the flanges and the grooves or channels are parallel to the rail and crosswise the tie, but the lower tie engaging projection is across the rail and parallel to the grain of the tie. (See 222 Fed., 267, 270.) (P. R., Vol. III, pp. 1410, 1424.) If the defendants' tie plate is an infringement of all or any of the claims of the Wolhaupter patents, then it follows that the construction shown in the Hudson, Wells, Gould and Goldie let-

ters patent, the Railway Age and German publication devices, and many others specified in letters patent shown, would be infringements of the Wolhaupter patents, if subsequent in date of invention. It is a well established rule that that which infringes, if later, would anticipate, if earlier.

Grant v. *Walter,* 148 U. S., 547, 553.
Knapp v. *Morss,* 150 U. S., 221, 228.
Miller v. *Eagle Mfg. Co.,* 151 U. S., 186, 203.
Parramore v. *Siegel-Cooper,* 143 Fed., 516, 517.
Standard Co. v. *Ramsay,* 143 Fed., 972, 975.

(1) *Defendants' tie plates do not infringe the Wolhaupter letters patent if valid.* No better argument on the question of infringement, if the claims of the Wolhaupter patent are conceded as valid and construed under the limitations necessarily imposed by the prior art, can be given than that by Judge Kohlsaat in *Railroad Supply Co.* v. *Hart Steel Co.* (Exhibit "I," and 193 Fed., 418, 423, 424), confirmed as it is by the opinion of the Circuit Court of Appeals of this Sixth Circuit in *Railroad Supply Co.* v. *Elyria Iron & Steel Co.* (130 C. C. A., 447), 213 Fed., 789, 796, and Exhibit III.

(2) *Origin of defendants' tie plate.* Defendants' tie plate was not the result of any actual suggestion on the part of Wolhaupter or of any representative of the Railroad Supply Company. If a study of or suggestions from the Wolhaupter specifications and drawings and the Letters Patent in suit would result in defendants' device, it clearly follows that the Wolhaupter devices must be held to be the direct outcome of the Wells, Reece, Dunham and Goldie specifications and drawings, as well as of a number of others described in letters patent and publications. But the evidence shows that the Southern Pacific System en-

gineers, dissatisfied with the Servis and Wolhaupter flanged tie plates and desiring to slightly modify the flat top Sacramento plate, got up the so-called Harriman plate. This is a plate with a side top shoulder and a rail bearing surface separated by two grooves or channels into three bearing surfaces all parallel to the rail and crosswise the tie. The bottom is flat. Julius Kruttschmidt, director of maintenance and operation of the System, objected to the Sacramento plate because of its weight and cost and asked for suggestions as to how it could be lightened and while he cannot clearly recall the source of the suggestion of channeling, thinks it came from Wallace. (P. R., Vol. I, p. 468.)

John Dove Isaacs, a railroad engineer of great experience, then engineer of maintenance of way for the Southern Pacific System, in response to this demand, suggested lightening by alternate sunken squares in the top, giving a checker-board arrangement and the ultimate idea of continuous channels was made by either Wallace or himself and they talked it up together. (P. R., Vol. I, pp. 452, 453.)

John H. Wallace, produced by complainant, gave a more detailed description of the transaction, but in every material respect corroborated Kruttschnitt and and Isaacs and declares that he suggested the channels for the purpose of lightening the Sacramento plate and received no suggestions from Wolhaupter or anyone connected with the Railroad Supply Company. (P. R., Vol. II, p. 555; P. R., Vol. II, p. 557.) This was in June, July and August, 1904. (P. R., Vol. II, p. 560.) No suggestion was received from the outside. (P. R., Vol. II, pp. 575, 576.) The Railroad Supply Company promptly claimed that the Harriman plate which was thus devised by Isaacs and

Wallace was an infringement of the Wolhaupter patents and the result was a compromise, allowing the Southern Pacific System to manufacture at its own mill *ad libitum* without royalty. (P. R., Vol. II, pp. 875, 976-979.) This neither concedes nor in effect recognizes the validity of the Letters Patent or claim of infringement. Ever if it did, there is not the slightest connection between the present defendants or the Atchison, Topeka & Santa Fe Railway Company and either the Railroad Supply Company or the Southern Pacific System.

Shortly before the devising of the Harriman plate, the Atchison, Topeka & Santa Fe Railway Company, dissatisfied with Wolhaupter tie plates, procured the investigation and report of Edwin O. Faulkner. In this investigation, Faukner saw the Glendon rib or Goldie tie plate and various other forms of plate that were in use including the Sacramento plate. A blue print or specimen of the Harriman plate was probably furnished the Santa Fe officials, but differed only slightly from the design already evolved. (Faulkner, P. R., Vol. I, pp. 202, 203, 208, 209, 232-239.) If so, this blue print of the Southern Pacific System of the Harriman plate was received through the medium of Bell, Secretary of the Railroad Supply Company, but such blue print, if furnished, came after Storey had embodied the same conception in a drawing and blue print dated May, 1904, has been produced and identified by both Faulkner and Storey (Exhibit "J," P. R. Vol. I, p. 322) and Faulkner had fully described this style of a plate both with and without lower ribs in his report. (P. R., Vol. I, pp. 238, 239.) As a result of the Faulkner investigation, an Atchison, Topeka & Santa Fe Railway Company engineer designed a tie plate quite similar to the Harriman plate but did this independently (P. R., Vol. I, pp. 315, 322),

except as to conferences with Faulkner. (P. R., Vol. I, pp. 315, 316.) This plate is shown by a blue print Exhibit "R." The question of flat or ribbed bottom, however, had not been definitely decided in the minds of the Santa Fe officials and engineers. (P. R., Vol. I, pp. 280, 281, 321.) The Santa Fe flat bottom plate was adopted in 1906 as a standard and for some time manufactured for it by the Sellers Mfg. Co. and Independent Railway Supply Company. (P. R., Vol. I, p. 280.) When the subject of flat or ribbed bottoms came up again in the Santa Road in 1908, Storey was asked to design a new tie plate, the bottom ribs were added and changes made in the detail of dimensions and thickness. (Faulkner, P. R., Vol. I, pp. 222, 225; Storey, Vol. I, 326, 327, 330-332.) It is perfectly evident that Wolhaupter, even if sufficiently experienced to have produced this style of plate would not have done so because, as he himself, declares, he does not consider a tie plate with a shoulder, top corrugations and under flanges parallel to the rail satisfactory or best for use. (P. R., Vol. I, p. 197.) And it is evident that Wolhaupter, Bell and Hawley were keeping a close tab on improvements in tie plates made by railroad engineers and trying to get control of their manufacture. Prior to the institution of this suit the Railroad Supply Company never made for actual use a tie plate with a top shoulder, top grooves and ridges parallel to the rail and lower projecting flanges parallel to the rail. (Bell, P. R., Vol. I, pp. 133, 134.)

(3) *Rule of construction.* With these facts and the state of the art at the times of the various Wolhaupter patent applications in view, it is perfectly plain that if the claims are held valid they must be construed in an extremely narrow way and limited to the specific de

vices shown. This construction is necessary under the rules laid down in:

White v. *Dunbar,* 119 U. S., 47, 52.
Knapp v. *Morss,* 150 U. S., 221, 228.
Westinghouse v. *Boyden Co.,* 170 U. S., 537, 558.
Hobbs v. *Beach,* 180 U. S., 383, 400.
McClain v. *Ortmayer,* 141 U. S., 419, 424.
Gates Iron Works v. *Fraser,* 153 U. S., 332, 348.
Office Specialty Co. v. *Fenton Co.,* 174 U. S., 492, 498.
Kokomo Fence Co. v. *Kitselman,* 189 U. S., 8, 23. (See note 4.)

(4) *If the claims are valid there is no infringement.* With the facts and the principles of these decisions in mind, it is evident that defendants' device, a flat tie plate with upper side shoulder, grooved and ribbed upper surface and lower projections for engaging in the tie, all arranged parallel to the rail and crosswise to the tie,

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Note 4. As to construction and limitation of claims by the specifications and the prior art, see

Paul Boynton Co. v. *Morris Chute Co.,* 87 Fed., 225, 227.
Durand v. *Schulze,* 61 Fed., 819, 820.
Boyden Power Brake Co. v. *Westinghouse Air Brake Co.,* 70 Fed., 816, 826.
Stirrat v. *Mfg. Co.,* 61 Fed., 980, 984.
Adams Electric R. Co. v. *Lindell R. Co.,* 77 Fed., 432, 449.
Denning Wire, etc. Co. v. *American Steel & Wire Co.,* 169 Fed., 793, 800.
General Compressed Air & Vacuum Machinery Co. v. *American Air Cleaning Co.,* 177 Fed., 272, 275.
Am. Bank Note Co. v. *City National Bank,* 181 Fed., 375, 378.
Frank v. *Mockridge Mfg. Co.,* 65 Fed., 521, 522, 524.
Sharp v. *Bellinger,* 168 Fed., 295, 302.
Hillard v. *Remington Typ. Co.,* 186 Fed., 334, 338.
Van Auken v. *Monash-Younker Co.,* 187 Fed., 141, 148.
Gilmer Co. v. *Geisel,* 187 Fed., 606, 611.
Calculagraph Co. v. *Automatic Time Stamp Co.,* 187 Fed., 276.
Underwood Co. v. *Victor T. Co.,* 188 Fed., 82, 85.
Geneva Mfg. Co. v. *Nat. Furniture Co.,* 188 Fed., 662, 670.
Standard Mach. Co. v. *Rambo & Regar,* 181 Fed., 737; 188 Fed., 323, 325.
Johnson v. *Johnson,* 190 Fed., 20, 28.
Tabor Co. v. *Munford Co.,* 190 Fed., 179, 184.
Irvington Co. v. *Utica &c. Forge Co.,* 191 Fed., 169, 172.

is an entire reconstruction and rearrangement of these different elements or features and cannot infringe a device which has an arch and girder construction, staggered ends and upper flanges, grooves and channels and lower tie penetrating flanges parallel to the grain of the tie shown in the first Wolhaupter letters patent. (P. R., Vol. I, pp. 11-14.) (Carter, Vol. I, 347, 350, 362, 364.)

Defendants' expert says that it is only by abandoning every showing of the Wolhaupter claim (8) in the first letters patent and relying instead upon the bare phraseology of the claim considered in the abstract and independent of the showing and the drawings and specifications, that any suggestion of identity between defendants' tie plate and Wolhaupter's claim can for an instant be recognized, and gives his reasons. (P. R., Vol I, 361.)

The claims in the second Wolhaupter letters patent (P. R., Vol. I, pp. 15-17) when limited to the specific devices therein claimed (P. R., Vol. I, p. 17) cannot be said to cover defendants' tie plate. Here the construction or arrangement of the flanges, upper and lower, is parallel to the grain of the tie and at right angles to the rail, while the arrangement in defendants' device is entirely the reverse. The Wolhaupter device is a built-up or framework tie plate, the defendants' a flat plate with modifications. After carefully examining the prior art and the claims of the second Wolhaupter patent, the same witness says that if the claims of the second Wolhaupter Letters Patent are construed as set out, and that this must be done in order to give even a shadow of validity there is no infringement because the claims are limited to a tie plate with lower flanges entering the tie parallel with the grain and located directly or substantially beneath those of the upper side. (Carter, P. R., Vol. I, 364.)

As to the claims of the third letters patent (P. R., Vol. I, pp. 18-21) the arrangement of the upper surface elements in both devices is the same. The rail shoulder is parallel to the rail in both and the grooves and bearings or flanges on the upper surface are parallel to the rail. But the lower tie engaging flanges of the Wolhaupter device are sharpened and parallel to the tie grain and thus variant from the Storey plate. The claims are plainly devoid of patentable novelty, but, if held valid, must be so narrowly construed as to make any claim of infringement an absurdity.

When testifying in reference to the construction and alleged infringement of the claims of the third Wolhaupter letters patent and after denying any novel structure or features therein, Carter declares that a glance at the aluminum models exemplifying the structures of the different Wolhaupter patents make clear the substantial and radical differences between each of those structures and defendants' tie plate. (P. R., Vol. I, 379-380.) And Wolhaupter himself has voiced the difference between his own tie plate ideas and defendants' tie plate by declaring that he does not consider a tie plate with side shoulder, top corrugations and under flanges parallel to the rail satisfactory to himself. (P. R., Vol. I, 197.) See *Railroad Supply Co.* v. *Elyria Iron & Steel Co.*, 213 Fed., 789, 790, 791, keeping in mind that the illustrations styled "plaintiff's tie plate" and "defendants' tie plate," on page 791 of this opinion are illustrations in reality of defendants' tie plate, and that until after the Story (defendant's) plate was devised and submitted to it, no form corresponding to the so-called "plaintiff's tie plate" was made by the plaintiff. (See, also, same decision, Exhibit III.)

The conclusion must be as to all the claims sued on, that if valid to any extent, there is no infringement.

VI.

THE OPINION BELOW.

It is respectfully submitted that the opinion of the Circuit Court of Appeals for the Seventh Circuit is in plain disregard in all its conclusions, both of the facts shown in this record and the law applicable thereto. Without stopping to discuss the question as to whether the various claims are limited, either as a matter of legal construction or by the use of the term "substantially as described," it is beyond question that such claims are limited, both as to validity and scope, by the prior art and patent specifications. The decision that the validity of the second and third Wolhaupter letters patent resulted necessarily from the declared validity of the first has already been shown untenable and that the directly opposite conclusion obtains. (Brief, *supra*, pp. 60-68.) The "commercial success" of the Wolhaupter tie plates has neither foundation in fact (Brief, *supra*, pp. 72-78) nor application in law. (Brief, *supra*, pp. 78-79.) The conclusion *in the opinion* as to the first Wolhaupter letters patent is that the claim is limited to the stepped construction but shows the advantage of having a series of flanges on the upper part of the plate for the rail to rest upon, and that the objects to be attained by the rail supporting flanges were separate and distinct from those to be accomplished by the stepped arrangement of the tie engaging flanges. (Vol. III, p. 1431.) (222 Fed., 266.) It is said "these advantages (rail supporting upper flanges) are manifestly independent of the character of the tie engaging flanges on the under side of the plate" and "the objects to be attained by rail supporting flanges were separate and distinct from those to be accomplished by the stepped arrange

ment of the tie engaging flanges." This is very close to a statement that the upper rail bearing flanges and lower tie engaging projections are absolutely independent of each other and were mere aggregations and wholly inconsistent with the subsequent conclusion of patentable combination. (P. R., Vol. III, p. 1414.) (222 Fed., 267.)

But so far as channeling and flanging the upper tie supporting surface of tie plates and kindred devices is concerned, we find such channels and supporting flanges or ridges, both separately and in combination with lower tie penetrating devices, in a number of letters patent, published articles, and tie plates actually used, and it is therefore not patentable novelty.

Again in concluding that the upper rail supporting flange was a true mechanical and patentable combination with lower tie engaging flanges, the court in terms held that *Pickering* v. *McCulloch,* 104 U. S., 310, 318, had gone too far and on the strength of some of its own prior decisions assumed to be applicable, practically overruled this and other decision of the Supreme Court and held the combination patentable.

Oshkosh Grass Matting Co. v. *Waite Grass Carpet Co.,* 207 Fed., 937, concerned Letters Patent for forcing material forward in a twine-making machine. An inspection of the decision, however, shows that every element in the machine contributed to the desired result in connection, harmony and unison with each and all of the others. One element omitted would have made the whole combination useless and inoperative. There was no *evidence* of any combination of the different elements in prior devices, as in the present case. Moreover, the decision was that the claims must be limited to the specific device shown in the letters patent and hence that the claims were not infringed. (207 Fed., 946.)

Krell Auto Grand Piano Co. v. *Story & Clark Co.*, 207 Fed., 946, related to an automatic playing attachment for musical instruments and claimed a recessed or hollow key slip with an outer rockable member in combination with the manual keyboard and expression-manipulatory devices. (207 Fed., 948.) The case came up on demurrer, and as the court absolutely refused to take judicial knowledge of prior publications and art exhibits, there was, of course, no showing of facts as to the state of the art, and on the question of patentable combination, in spite of the fact that the controlling levers and fall board had no immediate relation with each other (so found by the court, 207 Fed., 952) and a human operator was necessary in order to bring about a union of the elements, it was held as a matter of law, in the absence of a showing as to the facts of the prior art, that the claim was valid, and it was on this ground that the decision in *Union Edge Setter Co.* v. *Keith*, 139 U. S., 530, was avoided. (207 Fed., 954.)

The question of prior devices with upper rail bearing surfaces or flanges, both alone and in combination with lower tie penetrating devices, in combination with upper abutting side shoulder and in combination with both upper side shoulder and lower tie penetrating devices, has been gone into so extensively that the facts need not be recapitulated (see Brief, *supra*, pp. 36-59), especially as it is so thoroughly met by the decision of Judge Kohlsaat and the Circuit Court of Appeals for the Sixth Circuit. (Exhibits III and IV.) (193 Fed., 418; 213 Fed., 789.)

It does not require the evidence of experts to demonstrate that the devices shown in Letters Patent No. 142,020, August 19, 1873, to Hudson (P. R., Vol. III, p. 1079); Letters Patent No. 203,570, May 14, 1878, to Wells (P. R., Vol. III, p. 1088); Letters Patent No. 485,030, October 25, 1892, to Goldie (P. R., Vol. III, p. 1182); Letters

Patent No. 280,030, June 26, 1883, to Gould (P. R., Vol. III, p. 1098); Letters Patent No. 462,399, November 3, 1891, to Dockstader (P. R., Vol. III, p. 1158); Letters Patent No. 494,692, April 4, 1893, to Reece (P. R., Vol. III, p. 1196); Letters Patent No. 514,465, February 13, 1894, to Holmes (P. R., Vol. III, p. 1211); Letters Patent No. 522867, July 10, 1894, to Wilson (P. R., Vol. III, 1229); the article in the Railway Gazette, September 30, 1887, p. 630 (P. R., Vol. I, p. 513); Exhibit "D.D.D." (P. R., Vol. III, p. 961); Aluminum Model O-24; the article in the German publication (P. R., Vol. I, p. 521; Exhibits "K.K.K." and "L.L.L.," Vol. III, pp. 963, 965), and the Goldie ribbed tie plates, used on the Santa Fe Railroad from 1892 to 1904 (Pet., p. 28; Exhibits "B" and "C") all exhibit not only channeled, grooved and flanged upper surfaces, but exhibit them in combination with lower tie engaging projections and upper side shoulders.

Other Letters Patent show an upper corrugated surface. Letters Patent No. 469,386, dated February 23, 1892, to Dunham. (P. R., Vol. III, p. 1169; Carter, Vol. I, pp. 355, 356.)

There are also a number of letters patent which show the union in a tie plate or similar device of upper corrugated, ridged and channeled surfaces and upper side shoulders, as do also the devices described in the German publication. (Carter, P. R., Vol. I, pp. 371-380; Brief, *supra.*)

As to the second Wolhaupter letters patent, the specific limited union of upper rail supporting surfaces and lower tie engaging flanges parallel with the other flanges and directly beneath them is shown in letters patent to W. Goldie, No. 485,030, dated October 25, 1892 (P. R., Vol. III, p. 1182); letters patent to Avery, No. 574,773, dated January 5, 1897, application, March 19, 1896 (P. R., Vol.

III, 1290-1292); and Railway Gazette, January 1, 1887 (P. R., Vol. I, pp. 513, 514); Exhibit "D.D.D." (Vol. III, p. 961); and this same construction with the addition of an upper side rail abutting flange is also shown in the same patent specifications and publication. (Brief, *supra*, pp. 59-63.)

Coming to the third Letters Patent, the same situation obtains in regard to the state of the art as shown by the letters patent, publications and devices employed, as well as in a number of others, to which reference has been had. (Brief, *supra*, pp. 63-68.) All these disclose tie plates or similar devices with a rail supporting surface having transverse grooves or channels and a transverse rail abutting shoulder. In addition to other devices there were also two Wolhaupter Letters Patent issued before the application for the Second Wolhaupter patent with channeled surfaces, side shoulders and lower tie engaging projections, and four Wolhaupter Letters Patent issued prior to the application for the third Letters Patent which exhibited upper side abutting shoulder and a transverse groove or grooves across the plate, without making any claim whatsoever either for such elements separately or in union, thus conceding the prior use of such elements and abandoning any claim to monopoly therein. All these facts were ignored or misconceived by the lower court.

It is therefore urged that the decree of the Circuit Court of Appeals of the Seventh Circuit be in all respects vacated, set aside and reversed and that of the Sixth Circuit Court of Appeals affirmed.

Respectfully submitted,

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FREDERICK P. [redacted],
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EXHIBIT I.

(*Railroad Supply Co.* v. *Hart Steel Co. et al.*, 193 Fed., 418.)

IN THE CIRCUIT COURT OF THE UNITED STATES.

For the Northe- ·'strict of Illinois.

Ea·· ·ivision.

The Railroad Supply Company,
vs.
The Hart Steel Company and Guilford S. Wood.
} No. 29,294.

KOHLSAAT, *J.*

Complainant seeks herein to restrain infringement of (1) claim 8 of patent No. 538,809, granted May 7, 1895, to B. Wolhaupter; (2) claims 1, 2, and 3 of patent No. 691,322, granted January 14, 1902, to same, and (3) claims 7 and 9 of patent No. 721,644, granted February 24, 1903, to same, all for railway tie plates. They read as follows, viz.:

"8. A railway tie-plate formed on the under side with devices, more or less sharpened, adapted to penetrate and engage the tie and on its upper side with a series of flanges on which the rail rests, substantially as described."

"1. A railway tie-plate provided on its upper side with one or more flanges on which the rail rests or by which it is directly sustained and on the under side with one or more tie-engaging flanges, extending parallel with the upper flanges and directly beneath the latter, substantially as described.

2. A railway-tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained and on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter and sharpened to permit them to readily enter the tie, substantially as described.

3. A railway-tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained, on the under side with one or more sharpened tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, and on the upper side with an additional flange or flanges extending above the plane of the real sustaining flanges and adapted to receive the lateral thrust of the rail, substantially as described.

7. A tie-plate provided in its rail supporting surface with transverse grooves or channels, and at one margin of said supporting surface with a transverse rail abutting shoulder.

9. A tie-plate provided in its rail supporting surface with transverse grooves or channels reaching to the edge of the plate, and at one margin of said surface a transverse rail abutting shoulder."

In substance the subject-matters of the said several patents, so far as here involved, are as follows, viz.:

Claim 8 aforesaid covers a tie-plate with more or less sharpened depending tie-engaging projections on its under side to supplement the spikes, and having on its upper face a series of flanges on which the rail rests;

Claim 1, 2, and 3, aforesaid call for a tie-plate of the same general construction as that of said claim 8, having on its lower or under side tie-engaging projections parallel and in perpendicular alignment with the flanges in its upper surface, *i. e.*, transverse the rail, and having an additional flange on one or both outside edges of its upper face, extending above the other flanges and parallel therewith, and adapted to receive and resist the lateral thrust of the rail;

Said claims 7 and 9 call for a tie-plate having grooves in its upper surface transverse the tie and extending to the outer edge of the plate, running parallel to the rail and provided at one margin of its upper surface with a rail abutting shoulder extending parallel to the rail.

Defendant is charged with the appropriation of the substance of each of the foregoing claims in the construction of the combination constituting its tie-plate, having the corrugated top surface and the more or less sharpened tie-engaging flanges of claim 8, and align-

ment of the upper and lower flanges as in claims 1, 2, and 3 and the rail-abutting transverse shoulder of claims 7 and 9. Each of these elements, defendant insists, is found in the prior art. The defenses relied on are want of patentable novelty in view of the state of the art, and non-infringement.

It is contended that the corrugated rail-supporting surface of the device of claim 8 presents such a much longer-lived tie-plate than does the flat surfaced tie-plate which preceded it. That the furrowed surface had some advantage over the flat rail supporting face, seems to be fairly well established. It undertakes to make provision for the elimination of moisture, which corrodes, and sand and other gritty substances, which abrade, the tie-plate and tie, so that, for the purpose of this suit the utility of such a device must be conceded. The under tie-engaging flanges prevent movement of the plate upon the tie, and are concededly useful. Were further evidence of these facts necessary, it may be found in the disclosure of the record with regard to the use to which the device of the patents in suit has attained.

As a matter of first impression, it would seem as though the features of the claims alleged to be novel could be little more than the result of mechanical skill—something that the railroad building art must suggest. They must, however, be viewed in the light of the art as it stood at the time of the several alleged inventions in suit.

In the early days of railroading, engines and cars were light. Rails were laid upon and spiked into the ties or into wooden plates. As the weight and speed of trains and rail manufacturing facilities increased, it was found that this was not a safe or economical means for holding the rails in place. Flat plates of iron or steel construction came into use. It is estimated that at the present day a first-class engine weighs more than ten times as much as did one of the first commercial engines. The great increase in traffic demanded increase in the carrying capacity of the cars. This in turn demanded the strengthening of the tracks. To this end, inventors have been active in devising among numerous other track strengthening devices, tie-plates

which should meet the demands of increased strain upon the tracks and prevent as far as possible the destruction of railroad ties, the demand for the latter being such as to threaten the supply. Thus it was that the pressure for improvement in tie-plates became very great.

The specification in patent No. 538,809, aforesaid, (lines 13 to 49 inc., p. 1), reads as follows, viz.:

> "Heretofore in the use of railway tie plates two general styles of plates have been employed. The plates were first put into use without top flanges, that is, flanges on the top of the plate against which the rail flange could abut and the plate thereby be utilized to prevent the lateral movement of the rail and consequent widening of the gage; but in the use of these smooth top plates it was found that the constant thrusts of the rail laterally tended to shear the spike and the latter had to be frequently renewed. To relieve the spike and obviate this item of renewals the plate was provided with a top ridge or flange against which the rail flange could bear, the flanges on the under side of the plate which engaged the tie supposedly holding the plate against any movement along the tie and the plate thereby relieving the spikes from the shearing action of the rail caused by its lateral thrust; but in the use of these plates with top flanges it has been found that the lateral thrust of the rail has caused the flanges on the under side of the plate to break or compress the wood fibers and allow the plate to creep along the tie longitudinally thereof. When the plate has once moved it has been practically impossible to gain hold the top flange against the rail flange after the rail has been returned to its original and proper position, since the under flanges have no wood to abut against, the result being that even with the top flange on the plate, the spike has had to take the thrust of the rail after the plate has been in use a short time, thus rendering useless this top flange and soon shearing the spike."

From the record it appears that as to said claim 8, the prior art is, substantially, to be found in the following patents:

The railway chair of Wells patent No. 203,570, granted

May 14, 1878, disclosing a device having an underneath rectangular shaped projection or flange intended to be sunk in a channel cut into the tie and upper flanges upon which the rail rests, the grooves of which serve to lighten the device and afford protection from grit and moisture. This chair is meant to hold the ends of the rails. It extends over several ties. Complainant insists the chair is not in the tie-plate art. So far, however, as it makes public features bearing upon claims in suit aforesaid, it will be proper to consider it;

Hudson patent No. 142,020, granted August 19, 1873, which discloses a tie-plate with a channel on its upper face arranged to receive a flange in the bottom of the rail, shoulders on the outer edge of the upper face, embracing the rail-base on both edges and a rectangular projection or flange on its under side directly beneath its upper channel, designed to prevent shearing of the spikes and creeping of the plate;

Gould patent No. 280,030, granted June 26, 1883, for railroad plate provided with two or more V-shaped metal flanges or beads in its under side, which will readily be imbedded in the tie and which has one or more longitudinal grooves on its top or face surface to receive corresponding ribs or flanges on the bottom of the rail and on one edge a shoulder. A rubber cushion is provided on the under side, between the grooves or flanges;

Dunham patent No. 469,386, granted February 23, 1892, which shows a corrugated tie-plate, both sides or faces being corrugations, thus providing for protection against moisture and sand;

Goldie patent No. 485,030, granted October 25, 1892, for a tie-plate. This device has a slightly concave top face centrally located and a convex under face. The base of the rail rests practically on the plain surface at the sides of the depression, leaving an opening under and parallel to the rail. There are more or less sharpened flanges on the under side which penetrate the rail. A shoulder extending across the plate near one edge of the top surface resists side thrust. While not mentioned in the patent, it is evident that this tie-plate will take care of moisture and grit;

Servis patent No. 249,407, granted November 8, 1881, reissue 10302, reissued April 3, 1883, and No. 294,816,

granted March 11, 1884, for a wear plate, all show tie-plates having flanges on their under faces and flat upper faces;

In Reece patent No. 494,692, granted April 4, 1893, is shown a tie-plate which has more or less sharpened flanges on its under face and portions upon its upper face equivalent to raised ribs upon which the rail rests and also, rail abutting shoulders. The portions upon which the rail rests are produced by cutting out the metal from a plane top face, so as to leave ribs or strips of metal with openings through to the tie, as in fig. 2 of the patent;

Holmes patent No. 495,807, granted April 18, 1893, shows substantially the same tie-plate without the openings;

The patent to Churchward, granted November 7, 1893, and numbered 508,086, calls for a wear plate for railroad ties, having a flat rail supporting surface flanked by two transversely ranging rail abutting shoulders and an under-surface provided with transversely ranging and sharpened, tie-engaging ribs or flanges;

Worthington patent, No. 506,963, granted October 17, 1893, for method of making railroad tie-plates, shows a plate formed "with longitudinal ribs on both of its faces and then planing or cutting away parallel sections of the ribs upon one face of the plate to form the seat and abutments for the foot flange of the rail." This device as first prepared and before cutting away, is the device of claim 8 and claim 1 and 2 aforesaid;

Avery patent, No. 574,773, granted January 5, 1897, for a railway tie-plate, covers a device which has rail-supporting ribs on its upper face connected near their ends by transverse raised portions or narrow ribs, thereby forming a trough between each set of supporting ribs at the bottom of this trough, and adjoining the inner face of the transverse end ribs, a tongue of metal is cut and turned down, thereby constituting downward projecting teeth, which engage the tie much as shown in Wolhaupter patent No. 579,509, fig. 2, granted March 23, 1897. When the tie-plates are cast, the tie-engaging "tongues are cast integral with the plate." One object of this construction, it is stated, is to prevent the entrance of water and dirt between the plate and the tie

The troughs above referred to must be completely covered by the bottom flange of the rail in order to exclude moisture and grit. At line 41, p. 2, it is said: "A boss or lug E, or two lugs, may be formed on the top of one or more of the ribs to serve as abutments for the rail flange and prevent its lateral movement. These lugs may be pressed upward if the plate is made of wrought metal, or may be cast on, if made of cast metal." The lugs serve the same purpose as a shoulder.

Various other patents, such as Reece patent No. 488,662, for wear plate; Clark patent No. 529,854, granted November 27, 1894; Reece patent No. 541,984, granted July 2, 1895; Churchward patent No. 492,528, granted February 28, 1893, for a wear plate, having sharpened under flanges and a plain upper face with a shoulder; patent No. 506,963, granted to Worthington for making tie-plates, October 17, 1893; Holmes patent, No. 514,465, granted February 13, 1894, for a tie-plate; patent to Clark, No. 529,854, granted November 27, 1894, for a tie-plate and others, together with certain publications, disclose devices more or less resembling those in suit.

From the foregoing, it appears that tie-plates having flanged under faces more or less sharpened to engage the tie, were old when claim 8 was applied for; also that devices having flat tops, except a rail abutting shoulder, and more or less sharpened under flanges, were also old, that tie-plates having channels and attendant flanges, or projections and shoulders on their upper faces, and rectangular projections or flanges on their under side were old.

The device of claim 8 differs from the device of the Dunham patent only in its under flanges being more or less sharpened.

It also appears that tie-plates having upper and lower flanges, both parallel with the rail and those transverse thereto were old. In the Goldie patent, the depression made in the center of the plate is alleged by the patentee to be for the purpose of receiving the more or less rounded portion of the center of the rail foot or base. Fig. 2, shows a clear opening under the rail base, with the flanges of the base resting on those parts of the tie-plate not included in the concave center but immediately adjacent to and upon both sides of such center

depression. The effect of this would be to provide flanges on the upper face of the tie-plate upon which the rail rests. As said above, Goldie lays no claim to this feature of his device. As a witness for complainant he pronounces his device a failure. Inasmuch as his device has gone to the general public by expiration of his patent, his statement cannot prevail as an admission. The space under the rail in fig. 2 would be ample for the collection and removal of moisture and grit from the plate. It is apparent that the bearing rib or section of this tie-plate is above and in vertical alignment with the more or less sharpened flanges on the under face of the plate, as in the second patent in suit; so that if the Goldie depression is equivalent to the channels which produce the rail bearing flanges of claim 8, then, whether claimed or not, by Goldie, Wolhaupter was not the first to discover a "tie plate formed on the under side with devices, more or less sharpened, adapted to penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests" substantially as described in the first patent in suit. The alleged object of the device of claim 8 is to secure lightness, cheapness, strength, protection from moisture and grit, and to prevent creeping of the plate. All of these are secured in the Reece patent above set out.

Such being the state of the art, complainant's invention, as disclosed in claim 8, must be limited to the particular form of tie-plate shown in the drawings with only a very limited right to equivalents, if any. Under the state of the art, there could be no novelty in extending the lower flanges parallel with the grain of the tie. Goldie, Dunham, Reese, and others have the same arrangement. Wolhaupter prefers his plate formed into a trussed shape, but does not limit himself to that form. He claims a strong plate, since each point where the rail rests upon the plate, is supported and trussed by metal which is more or less on edge instead of on its side, thereby forming for each resting point of the rail, two girders C^7 joined at the apex by the top flanges C^4 where the rail rests.

If the device of claim 8 is to be compared separately with defendant's alleged infringing tie-plate, it is evi-

dent that the latter lacks the under side flanges formed so as to give an arch effect to support to the tie-plate. Its under face is flat with V-shaped depending projections in more or less perpendicular alignment with the upper face raised portion thereof. Its upper flanges, if they may be so termed, run parallel to the rail and transverse the tie as do its under flanges. While those of claim 8 run transverse the rail and parallel to the grain of the tie, other differences are disclosed, so that were the two to be placed in conflict infringement would not be deemed established, in view of the state of the art.

Compared with claims 1, 2, and 3, of patent No. 691,-332, it will be seen that the under flanges of defendant are located with respect to the upper rail rests, the same as in Goldie, Reece, and Wolhaupter, provided the upper rail rests may be termed flanges in Reece and Goldie. Defendant's shoulder is that of Goldie, whereas the shoulder device of claim 3 is practically that of Reece. It lacks also the punched out teeth of Wolhaupter as shown in the specification. Were these two devices here in suit alone, infringement could not be decreed in view of the condition of the art at date of patent.

Considering defendant's device in comparison with claims 7 and 9 of patent No. 721,644, it appears that it comes so far as the said claims go within the language thereof. It has the transverse grooves reaching to the edge of the plate on its rail-supporting surface and also the transverse rail-abutting flange. As above stated, the only improvement of claims 7 and 9 deemed necessary to consider here is the rail-abutting shoulder. The language of these claims is broad enough to include any tie-plate having such a shoulder in connection with grooves on its upper face. Patent to the same Wolhaupter, No. 579,509, aforesaid shows substantially this same arrangement of grooves on the upper face of a railroad tie-plate in combination with a shoulder or rail-abutting flange. It is found in Goldie patent aforesaid. If it is to be construed so as to include defendant's tie-plate, it must be held to be invalid. This, however, is not necessary. There seem to be few lines of the inventive art which have been so diligently followed up as the tie-plate.

The minutest advances have been recognized by the pat
ent office. It is, therefore, not deemed necessary to hol
this third patent invalid, for what it calls for as limite
by the prior art.

It is the judgment of the court that defendant's de
vice does not infringe any of the claims in suit in viev
of the state of the art. The bill will, therefore, be dis
missed for want of equity.

EXHIBIT II.

IN THE UNITED STATES DISTRICT COURT

Northern District of Ohio

Eastern Division.

The Railroad Supply Company, *Complainant.*
vs.
The Elyria Iron and Steel Company, *Defendant.*
No. 7668.

MEMORANDUM OPINION.

DAY, *J.*

This is a suit for an injunction to restrain the infringement of (1) claim 8 of patent No. 538,809, granted May 7, 1895, to B. Wolhaupter; (2) claims 1, 2 and 3 of patent No. 691,322, granted January 14, 1902, to B. Wolhaupter, and (3) claims 7 and 9 of patent No. 721,644, granted February 24, 1903, to B. Wolhaupter.

All these claims are for railway tie plates.

This patent has been before the United States Circuit Court for the Northern District of Illinois. The same claims were considered between the same parties on the same record, and I presume that practically the same arguments and briefs were presented. At that time the various claims were given very careful consideration by Judge Kohlsaat. I have carefully listened to the arguments of counsel, and given careful consideration to Judge Kohlsaat's opinion, and I am forced to reach the same conclusion as the learned judge did in the case before him in the Eastern Division of the Northern District of Illinois. I do not reach this conclusion by the application of any rule of comity, but after a consideration of the entire case. I think that such a con-

clusion is well based upon the record, and furthermore that it should have a practical result. It is hard to see the necessity for repeated litigation in patent matters where ample opportunity is afforded in the jurisdiction where the suit was originally argued to resort to a court of appeals for a final and authoritative determination of the issues involved.

It is accordingly the judgment of the court that defendant's device does not infringe any of the claims in suit and the bill, therefore, will be dismissed for want of equity.

DAY,
Judge.

CLEVELAND, OHIO,
March 4, 1912.

EXHIBIT III.

(*Railroad Supply Co.* v. *Elyria Iron & Steel Co.*, 213 Fed., 789.)

(Circuit Court of Appeals, Sixth Circuit. April 7, 1914.)

Appeal from the District Court of the United States for the Eastern Division of the Northern District of Ohio: William R. Day, Judge.

Suit in equity by the Railroad Supply Company against the Elyria Iron & Steel Company. Decree for defendant, and complainant appeals. Affirmed.

T. E. Brown, of Chicago, Ill. (C. C. Linthicum and Clarence E. Mehlhope, both of Chicago, Ill., of counsel), for appellant.

F. F. Reed and Edward S. Rogers, both of Chicago, Ill., and James Negley Cooke, of Pittsburgh, Pa. (F. P. Fish, of Boston, Mass., of counsel), for appellee.

Before WARRINGTON and DENISON, Circuit Judges, and SATER, District Judge.

SATER, District Judge.

The plaintiff is the owner of the three Wolhaupter patents numbered 538,809, 691,332 and 721,644, issued May 7, 1895, January 14, 1902, and February 24, 1903, respectively. The evidence before us is said to be the same as that on which the case was heard not only in the District Court, but previously by Judge Kohlsaat, in *Railroad Supply Co.* v. *Hart Steel Co.*, 193 Fed., 418. The trial court, as the result of an independent study, concurred in the conclusion reached in such reported case and dismissed the bill. The case stands for decision on appeal.

The plaintiff charges that the defendant, by its manufacture of certain tie plates and its sale of the same, through a selling agent, the Hart Steel Company, to the Atchison, Topeka & Santa Fe Railroad Company, infringed claim 8 of the plaintiff's first patent, claims 1, 2, and 3 of its second patent, and claims 7 and 9 of its third patent. The respective claims so alleged to be infringed are as follows:

> "(8) A railway tie plate formed on the under side with devices more or less sharpened adapted to

penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests, substantially as described."

"(1) A railway tie plate provided on its upper side with one or more flanges on which the rail may rest or by which it is directly sustained, and on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, substantially as described."

Claim 2 is the same as claim 1, excepting it specifies by insertion after the word "latter" that the lower flanges are "sharpened to permit them to readily enter the tie."

Claim 3 is made different from claim 2 by adding before the words "substantially as described" the further element:

"And on the upper side with an additional flange or flanges extending above the plane of the rail sustaining flanges and adapted to receive the lateral thrust of the rail."

"(7) A tie plate provided in its rail supporting surface with transverse grooves or channels, and at one margin of said supporting surface with a transverse rail-abutting shoulder."

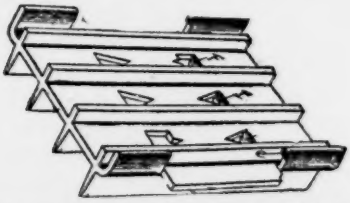
Excepting the limiting phrase, "reaching to the edge of the plate," added after the words "grooves or channels," claim 9 is the same as claim 7.

In support of its defense of noninfringement, the defendant avers: (1) That the state of the art and of tie plate manufacturing on the respective dates on which the three letters patent were issued was such that each and all of them are void for want of novelty or invention; (2) that if, however, any patentable invention is disclosed in any one or more of the letters patent, the claims must be limited to the specific devices therein set forth, and cannot be so broadened as to include the defendant's tie plate; and (3) that there is no patentable combination shown in the specifications and claims of any of the letters patent, in that the different elements or parts which are claimed to be in combination are all old individually and collectively, and are mere aggregations, having no correlative or modified functions or action upon each other or any joint contributive action in producing any new result, either originally or in Wolhaupter's devices.

A cross-section or end view of the tie plate covered by the first of the patents in suit and drawings of the tie plates delineated and described in the second and third of such patents, respectively, are successively shown as follows:

Wolhaupter Device, First Patent.

Wolhaupter Device, Second Patent.

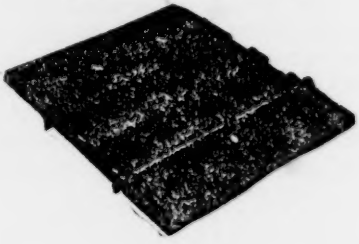


Wolhaupter Device, Third Patent.

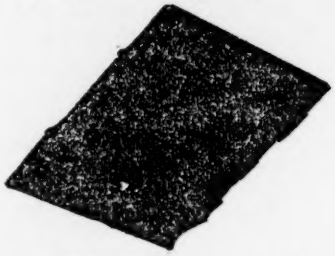
The modified forms of the T-shaped plates appearing in the third patent, on account of their general resemblance to the form above shown, need not be reproduced.

The first of the next following illustrations represents a form of tie plate manufactured by the plaintiff for commercial use, and claimed by it to be within the terms of the patents and to be infringed; the second, that made by the defendant:

Plaintiff's Tie Plate.



Defendant's Tie Plate.



The form of plaintiff's commercial plate may be varied by the use of additional top surface grooves and rail sustaining flanges.

The primary question is the validity of the patents in suit. It is not necessarily the only question for decision, nor will the correspondence of defendant's device with some one or more of the claims in suit conclusively settle the question of infringement. *Westinghouse* v. *Boyden Power-Brake Co.*, 170 U. S., 537, 568, 569; 18 Sup. Ct., 707; 42 L. Ed., 1136. In view, however, of the resemblance between the tie plates last above shown and of the manifest dissimilarity in appearance between the plaintiff's tie plates in commercial use and those shown and described in the drawings and specifications, the construction, whether broad or narrow, to be placed on the patents, if valid, becomes determinative of the rights of the litigants. The two questions are so related and so dependent on the prior state of the art that a consideration of the one necessarily runs into that of the other. The transition from the relatively small and lightweight engines and cars which characterized early railroading to the larger, weightier, and speedier engines and heavier, more capacious, and more heavily loaded cars provoked activity among inventors in devising means, including railway chairs and tie plates, to prevent the spreading of the track, due to lateral strain, and the destruction of the tie from abrading and cutting action of the rail. Before Wolhaupter applied for the first of the patents in suit, tie plates had assumed, as regards their lower portions, two well-known styles or forms: (1) Those whose downward-extending ribs or flanges were adapted to enter the tie longitudinally and parallel with its grain, so as to separate, but not to cut, the fiber; and (2) those

whose downward-projecting devices were so disposed as to extend transversely of the grain of the fiber, and, in consequence, to cut into and sever the same. The distinctive character of each of the forms and the theory of which it is expressive are recognized by Wolhaupter in his patent No. 530,738, issued in 1894, as well as by his predecessors, Reece and Servis, in their respective patents, No. 488,662, 1892, and No. 524,868, 1894. Those of the second form have, with substantial uniformity, employed but two shallow continuous lower ribs, excluding from consideration those on which mere projections are used. The apparent reason for adopting that form of construction is the relatively greater resistance of the transverse ribs not only to the force applied to imbed them in the ties, but also, on account of their pressure throughout their entire length against the compressed or severed fiber, to the outward or lateral thrust of the rail. With equal uniformity, patentees of plates of the first form have called for more than two (i. e., a series of) lower flanges with comparatively sharp lower edges and of greater length in comparison with both the lower ribs of those of the first form and also the thickness of the body of the tie plate. Their greater number and greater length are designed to increase their resistance to the lateral pressure of the rail, such resistance being restricted to the friction of the fiber against their sides and its compression by their blunt ends. For his patent of 1894, and for each of those in suit, Wolhaupter chose a device of the first above-mentioned form. In that of 1895 he alludes to the further well-known classification of plates (whatever direction or character their flanges may assume) with reference to their top surfaces—those having such surfaces smooth and those having flanges to receive the outward thrust of the rail. As his patent betrays a knowledge of variously constructed plates then on the market, he might well have further recognized and specifically named those whose upper surface is grooved or channeled. Experience taught that the lateral thrust of the rail against the outer top flange of tie plates, having such, caused the under flanges engaging the tie lengthwise to compress the wood fiber, and that such compression permitted the plates to creep toward the end of the tie, thus widening the gauge and increasing the pressure and abrading action on the spike. On account of thus

lengthening the depression or indentation made in the tie by the lower flanges, it was, he says, practically impossible, when the plates had once moved, to return them to their original and proper position. He therefore, in such patent—the first in suit—provided a preferably truss-shaped, or, as distinguished from a flat or plain top surface, a "corrugated" or ridged plate on which to rest the rail between two upward-projecting flanges against which the rail abuts, and blunt or square-ended, regularly stepped, lower flanges, supplementary to the spikes, which lower flanges are cut on a line diagonal with the rail, are preferably made with comparatively sharp lower edges, and extend downward directly below the grooves or valleys on the top of the plate sufficiently to become rather deeply imbedded in the tie. If preferred, the plate, instead of the flanges, may be cut diagonally to the rail. The distinguishing feature of his device is not a series of relatively narrow, flat-topped, supporting surfaces, suitably spaced apart, i. e., a corrugated top surface for the plate, as distinguished from a flat or plain top surface; for, in alluding to the permissible variations in construction, none of which was to depart from the prime object of his invention, which is the stepped flanges or lower stepped projections, he states that the flanges may be divided; that instead of flanges stepped projections may be used; that a square, instead of a beveled, plate may be employed, and the under flanges alone be stepped; that but one end of the plate need be stepped; or that flanges having one or more of their ends stepped might be applied to a flat plate or to the numerous other constructions of plates then on the market. His top surface construction may be entirely omitted. Disregarding his thirteenth claim, which relates wholly to spike holes, each of his remaining 13 claims covers his lower flanges, and but 4 of them mention his upper flanges. The body of his plate may be changed, or may assume the form shown in some prior invention, but his stepped form of lower flanges or projections must be used, else his purpose to prolong the life of the tie cannot be attained. The language employed in his patent precludes the substitution for them of any alternative form. To locate his flanges parallel with the rail necessitates an abandonment of the "prime object" and "essential idea" of his invention, which he declared to consist in

providing a plate having on its under side a series of stepped flanges or projections arranged in a diagonal line with respect to the rail flange. The purpose of his peculiar form of construction is that the plate, after it has by lateral pressure been longitudinally displaced, may, for the purpose of prolonging the use of the tie, be taken up and the original gauge restored and the spikes relieved of undue pressure by so placing the plate on the tie that one of its flanges will, by pressure make a new indentation and each succeeding flange will fit into a previously formed depression, with its blunt end abutting against the previously compressed fiber, whose power to resist the outward thrust of the rail is enhanced by the depth of the indentations produced by his necessarily somewhat lengthened flanges. He contemplated two adjustments of the character mentioned, and, if stepped flanges be placed at both ends of the plate, additional readjustments to continue the life of the tie may be made by turning it end for end. If this last form of construction be adopted, it would seem there must necessarily be, to accomplish fully the inventor's purpose, an upward-projecting flange at each side of the plate, to receive the lateral thrust of the rail. It should be said, however, that there is no call in his eighth claim for such flanges. The prominence which he gives to the adjustable feature of his plate and the means of securing the same, as evidenced by his later patent, No. 579,509, 1897, convinces us that the thought of a tie plate with other than somewhat lengthy, blunt-ended, stepped flanges or projections to engage the ties parallel with the fiber was not present when the first patent in question was issued, or when he obtained his patent No. 542,787, in 1895; and in his last two patents in suit the expressed preference for flanges of that character declared in 1894 still persisted.

The leading purpose of his second patent, which is conceded to be an improvement upon, and a carrying forward of, the invention shown in the first patent in suit, is to locate his four preferably long, sharp, narrow, longitudinal, tie-engaging flanges directly or substantially beneath his four, narrow, preferably flat-topped, rail-sustaining flanges, whose parallel sides are perpendicular to the intervening flat-bottomed top grooves or channels, that the weight may

be sustained at points where the pressure on the plate is greatest and buckling thereby minimized. At each side of the top of the plate is a turned up portion to form abutting flanges to receive the thrust of the rail. The only element in his device whose omission was deemed unimportant is the punched out triangular teeth. His rail abutting flanges and lower ribs are substantially those shown in the patent to Reece, No. 494,692, 1893.

The dominant thought in the patentee's mind, as disclosed by his third patent in suit, was, aside from his purposed economy in the use of old rails, a T-shaped tie plate whose principal flange shall conform somewhat closely to the shape of the upper portion of the rail out of which it is to be made, and whose top surface configuration shall be such that water, sand, and other deleterious substances, such as brine dripping from cars, will drain off or away from the plate. He therefore provided downward-sloping grooves on the top of his plate, which may run parallel with, but are preferably transverse or diagonal, to the tie, and longitudinal tie-engaging flanges projecting from its lower surface, that the suction of the train, which, in passing, is transverse to the plate, may be utilized in clearing the plate of any material that may find lodgment on it. His main holding flange of unusual length, on which he lays stress, is central of the plate. It is therefore made much longer than those at the edge, whose office is to force the wood of the tie inward to a firm and close contact with the central flange, to prevent the lifting of the outer edges of the plate, and to exclude moisture and sand from its under surface. He suggested no substitute for this particular shaped flange, which, as he understood, had in practice been abandoned. On the contrary, he intended to restore it to use and good repute. His other lower flanges are but auxiliary.

All of the flanges and grooves, both upper and lower, of the defendant's commercial tie plate run transversely of the tie. The lower ones are sunk into the tie by the pressure of the loads passing over them, and, by reason of the lateral thrust, compress the wood fiber outwardly throughout their entire length. As compared with the device shown in Wolhaupter's first patent, they are not stepped or given an arched effect to support the tie plate, and do not project immediately below the bottom of the

valleys of the upper grooves, but are V-shaped, and extend from a flat under surface at points directly or substantially beneath, but not between, the upper rail-bearing flanges. The defendant's plate has an upward extending flange, like that of Wells, No. 203,570, 1878, and of Goldie, No. 485,030, 1892, against which the rail bears by reason of the lateral thrust. No such element is called for in any of the claims in question, excepting 3, 7, and 9. It has no long, narrow, sharpened flanges, nor a central flange of that character, because they are not necessary to insure efficiency. They extend, like those shown in Wolhaupter's second patent and that of Goldie, No. 485,030, Fig. 1, from directly or substantially beneath rail-bearing flanges, but not to afford means for sustaining the weight "at the points where there is the greatest pressure on the plates." The weight of the passing loads is sustained by the bottom of defendant's plate, and not by its lower flanges. Were it otherwise, in the absence of a central flange, its plates would probably break at the middle. The use, in connection with defendant's device, of a central flange like that shown in Wolhaupter's third patent, or of one approximating it in length, is impracticable. The defendant depends wholly on flanges placed well toward the outer edges of its plate to hold it in position, excepting, of course, spikes, of which both avail themselves. The use of its plate by defendant has demonstrated that it does not require a central lower flange.

The field of tie plate invention had, at the time Wolhaupter entered it, been so assiduously cultivated as to offer many suggestions to and impose many limitations upon him. The great usefulness of tie plates to so important an industry as that of railroading has apparently induced great, if not excessive, liberality in awarding patents for even slight advances in the prior art. This appears by a comparison, for instance, of Goldie's patent No. 610,179, 1898, with Wolhaupter's patent of 1902, applications for both of which were pending at the same time. If the plaintiff's patents are valid, they are narrow, and entitled to but a limited range of equivalents, whether considered separately or as conjointly used. Invention in tie plates having been sought by so many minds, it is not wonderful that they were developed in many different and independent forms, all more or less

original, and yet all having a somewhat general resemblance to each other. No one inventor preceding all the rest hit upon something which underlaid and included all that they produced, and thus acquired a monopoly and subjected them to tribute. The advance in the art was gradual, and proceeded step by step, so that no one acquired an exclusive monopoly, and therefore each patentee acquiring a valid patent became entitled only to his own specific form of device. *Railway Co.* v. *Sayles*, 97 U. S., 554, 556, 557, 24 L. Ed., 1053. The extent to which Wolhaupter was indebted to his predecessors in the art will appear from the disclosures made by a few of the many patents in evidence. In all of his devices in question he sought to combine, with strength, lightness of weight and economy in production; but the same intent, sometimes affirmatively expressed, and sometimes not noted, because obvious, is manifested by others whose patents antedate his. The use of an upward-extending flange on one or both sides of tie plates to restrain the rail and receive its lateral thrust was so common prior to 1895 that a citation of earlier patents to show such element is unnecessary. The use of grooves or channels on the upper surface of his plate to serve as a receptacle for sand, grit, and other hurtful substances, and to facilitate their removal and the evaporation of moisture, had been expressly mentioned in the patents of Wells, No. 203,570, 1878, and Dockstader, No. 462,392, 1891, and are seen transversely of the rail in that of Wilson, No. 522,867, 1894. Dunham's device, patent No. 469,386, 1892, performs the same service, and, in addition, by reason of air spaces beneath the plate, facilitates the evaporation of moisture that may get between the plate and the tie. As the grooves in the Wells patent are parallel with the rail and in the line of the suction caused by the passing trains, they ought, it would seem, to be more effective in freeing the plate or chair of foreign substances than the grooves transverse to the rail shown in Wolhaupter's first and second patents. Dunham, among others, preceded Wolhaupter in the use of a "corrugated" or ridged plate of a truss nature, placed parallel with the tie, and alluded to the fact that a corrugated plate or chair in a groove or recess in the tie had been proposed, probably referring to the Ashcroft patent No. 388,240, 1888. His plate does not have sharpened lower

flanges to enter the tie, or a flat-topped projection extending above the concave surfaces to receive the rail, but the lower contacting portions of his plate must necessarily, to some extent, be depressed into the tie, and, if the top surface of the plate devised by Dunham (Fig. 4) and Wolhaupter, respectively, be made flat, which each of them says is permissible as regards his own device, their plates do not substantially differ, save in the degree of bluntness and the length of their lower flanges. The assistance in sustaining the weight put upon the plate and the exclusion of moisture from beneath it, attributed by Wolhaupter to the sloping or truss nature of the approaching sides of the lower flanges in his first patent, were also secured by the earlier devices of Churchward, No. 508,086, 1893, Worthington, No. 506,963, 1893, Holmes, Nos. 514,465 and 514,466, 1894, and Gabel, No. 530,175, 1894. Blunt or square-ended lower flanges engaging the tie lengthwise and necessarily compressing the wood fiber as the lateral pressure of the rail forces them toward the end of the tie were not original with Wolhaupter but are found in the two early patents of Servis, Nos. 249,407, 1881, and 294,816, 1884, of Holmes, Nos. 495,807, 1893, and 514,465, 1894, the patent of Worthington, and also of Reece, No. 494,692, 1893. Excepting that of Servis (No. 249,407, Figs. 3 and 4), all of the last named patents show, as does Wolhaupter's, the lower edges of the flanges to be somewhat sharpened. The location of the lower tie-engaging flanges immediately or substantially beneath the shoulders or flanges sustaining the rail, which is the primary thought embodied in Wolhaupter's second patent in suit, is found in the patent of Goldie, No. 485,030, 1892, and, if there be but one upper rail-supporting flange or surface, as claims 1, 2 and 3 permit, in those of Worthington, and of Servis, No. 524,868, 1894. Sellers, by his patent No. 684,466, 1901, preceded Wolhaupter in the thought expressed in the third patent in suit, of manufacturing tie plates from old rails, and in the use of a long, central holding, lower flange and a grooved top surface. Wolhaupter flanked his central holding lower flange with two shelter side flanges, but Wilson had previously done the same thing. Sellers' grooves, like those in the Wilson patent, run parallel with the tie; whereas those in the

Wells run parallel with the rail, and those of Wolhaupter may be located either parallel with or transversely of it.

The production of either defendant's device or that of complainant in commercial use necessitates a complete reorganization of the Wolhaupter devices, whether they be considered separately or conjointly. It is clear that, if the patents and claims in question are valid, they must necessarily be so narrowly construed as to relieve the defendant from the charge of infringement. But we prefer to rest our conclusion on other grounds.

The plaintiff rightfully contends that claim 8 is so broad as to embrace any tie plate having on its under side more or less sharpened tie-penetrating and engaging devices and on its upper side a series of flanges on which the rail may rest. No limitation by the drawings or the specific form of description can be imported into it without making it identical with some one or more of the other claims. It was intended and granted as a monopoly upon the broad generic idea of which the form shown in the drawings and description was a species. Wolhaupter endeavored to cover a field of invention far wider than he was entitled to occupy, and the claim must be held void, because it is broader than the real invention. *Edison* v. *American Mutoscope Co.*, 114 Fed., 926, 934, 52 C. C. A., 546 (C. C. A., 2); *National Enameling & Stamping Co.* v. *New England Enameling Co.*, 151 Fed., 19, 23, 80 C. C. A., 485 (C. C. A. 2). By like reasoning, each and every of the other claims involved must also be held invalid.

In view of the prior state of the art, which will not be further considered except to illustrate our views, no device constructed according to any of the claims in question involves invention. Wells' patent calls for two projecting lateral flanges to restrain and receive the thrust of the rail and three rail-sustaining bearings or top flanges located in the same horizontal plane. On each side of the central flange is a groove to lighten the structure without impairing its strength, and to care for sand and grit. Directly below the central rib or flange is a square-bottomed rib to prevent longitudinal and lateral displacement. He does not provide for spike holes; neither does claim 8 call for them. His patent does not suggest that his lower rib may be more or less sharpened; but so old a patent as that of Hudson, No. 142,020, 1873, taught that

a V-shaped or other suitably shaped flange might be used instead of a square-bottomed one, and those of Gould, No. 280,030, 1883, Goldie, No. 485,030, Worthington and Holmes, No. 495,807, that the use of two or more sharpened lower flanges was a well known expedient. Plaintiff's commercial plates show a reduction to two or more, as convenience suggests, of the multiplicity of top grooves disclosed in the Wolhaupter patents, and their top surfaces are thus assimilated to that of Wells. In such commercial plates the plaintiff also reduces to two the multiplicity of lower flanges shown in Wolhaupter's patent in question, and places them transversely of, instead of parallel with, the tie. Neither the plaintiff nor Wolhaupter deemed such reduction as to grooves or flanges or the change in the course or form of both from a position parallel to the fiber to one transverse of the same to be without the terms of the patent. If a reduction in the number of flanges and a change in their form does not involve invention (and we think it does not), and is but an authorized application of the rule of equivalents, then to increase the number of flanges (in the Wells patent, for instance) and modify the form must also fall within the same rule; but this makes the Wells patent anticipatory not only of the first, but of all three, of Wolhaupter's devices, as claimed in this case. The fact that Wells' device spans two or more ties and is a railway chair does not preclude consideration of it as anticipatory. Sectioned or reduced in length so as to span a single tie, as does that of Goldie, it assumes the form of a tie plate. Railway chairs are a species of railway plates or track fastenings, and possess the essentials of a tie plate, in that they maintain the alignment of the rails and the gauge of the track, and are so closely allied to tie plates that both inventors and the patent office have applied the name of the one to the other, as appears from the patent of Goldie, No. 426,530, 1890, and Parsons, No. 465,492, 1891.

Reece and Holmes in their respective patents, Nos. 494,692, and 495,807, 1893, each wished to provide a series of stops, or abutments, or flanges on the upper surface of their respective devices to receive the outward bearing of the foot flange of the rail. Wolhaupter carried this same idea into his second patent. Wells had employed a lower flange extending from a flat under surface and

directly beneath an upper rail-bearing flange located between grooves or valleys. A series of rail-bearing flanges extending above the adjoining top surface grooves or depressions are found in Wolhaupter's first patent in suit. Such a modification of any one of the devices shown in the last four named patents as would make it conform to the device claimed in the second patent in suit would not involve the exercise of the creative faculty.

The Hart patent, No. 696,964, 1902, provides for lower flanges parallel with the fiber of the tie and for grooves on the upper surface reaching from the middle of the plate to its outer edges, parallel with the rail. This is one of the forms permitted by the third Wolhaupter patent. The only difference between the two is that Hart's patent shows four lower flanges, instead of three; his outer flanges being longer than those centrally located. Figures 10 and 11 in Wolhaupter's patent No. 691,037, 1902, both show a series of upper surface grooves. Figure 11 further shows that one long central lower flange is deemed by him a modification of the two lower flanges shown in figure 5. There can be no originality, in view of the prior art, in the use by Wolhaupter of a multiplicity of lower flanges, as compared with the patent of Sellers, nor an avoidance of the rule of equivalents by his use of three flanges instead of the four found in the Hart patent. In view of the Goldie patent, No. 610,179, 1898, which has two lateral lower flanges (Fig. 1) (but may have a third at the center of the plate) and a top surface groove, all of which grooves and flanges run parallel with the tie, the recognition by plaintiff and Wolhaupter that a variation in the direction given the grooves and flanges and in the number of each falls legitimately within the rule of equivalents, places the patents of both Goldie and Sellers, and especially that of Sellers, in the anticipatory class, and robs of patentability Wolhaupter's third device as herein claimed. The use of the long lower central flange, as we have heretofore seen, was anticipated by both Sellers and Wilson.

Other questions discussed need not be considered. In view of the conclusion reached, the trial court must be affirmed, and it is so ordered.

EXHIBIT IV.

(*Railroad Supply Co.* v. *Hart Steel Co. et al.*, 222 Fed., 261.)

(Circuit Court of Appeals, Seventh Circuit. January 5, 1915.)

Appeal from the District Court of the United States for the Eastern Division of the Northern District of Illinois; Christian C. Kohlsaat, Judge.

Suit in equity by the Railroad Supply Company against the Hart Steel Company and Guilford S. Wood. Decree for defendants, and complainant appeals. Reversed.

For opinion below, see 193 Fed., 418.

Taylor E. Brown, Charles C. Linthicum, and Clarence E. Mehlhope, all of Chicago, Ill., for appellant.

Frank F. Reed and Edward S. Rogers, both of Chicago, Ill. (Frederick P. Fish, of New York City, of counsel), for appellees.

James Negley Cooke, of Pittsburgh, Pa., for defendant.

Before BAKER and SEAMAN, Circuit Judges, and GEIGER, District Judge.

BAKER, *Circuit Judge.*

Appellant failed in its suit to hold appellees as infringers of claim 8 of patent No. 538,809, May 7, 1895, and claims 1, 2 and 3 of patent No. 691,322, January 14, 1902, and claims 7 and 9 of patent No. 721,644, February 24, 1903, all granted to B. Wolhaupter, appellant's assignor. A report of the decision in the trial court is found in 193 Fed. 418. On a record identical with that now before us, the Court of Appeals of the Sixth Circuit, in *Railroad Supply Co.* v. *Elyria Iron & Steel Co.*, 213 Fed. 789, ... C. C. A. ....., adjudged that the claims in suit were void for lack of invention. While these decisions are entitled to, and have been given great weight in our consideration of the case, neither of them can be allowed to control our judgment or relieve us in any degree from giving to the record a complete and

independent investigation. We proceed to set forth the findings of fact and conclusions of law which lead us to hold that the claims are valid and infringed.

[1] I. The inventions covered by the several claims in suit are susceptible of joint use in one article, a railroad tie plate, and therefore the three patents are properly brought forward in one suit. Of the three, we deem the first the most important, the others being improvements of the tie plate covered by claim 8 of the first patent. That claim reads as follows:

> "8. A railway tie plate formed on the under side with devices more or less sharpened adapted to penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests, substantially as described."

1. At the root of the case lies the inquiry whether it is true that:

> "Wolhaupter endeavored to cover a field of invention far wider than he was entitled to occupy, and the claim must be held void because it is broader than the real invention."

This conclusion is based on the finding that:

> "The distinguishing feature of his device is not a series of relatively narrow, flat-topped, supporting surfaces suitably spaced apart, i. e., a corrugated top surface for the plate as distinguished from a flat or plain top surface; for, in alluding to the permissible variations in construction, none of which was to depart from the prime object of his invention, which is the stepped flanges or lower stepped projections, he states that the flanges may be divided; that instead of flanges stepped projections may be used; that a square, instead of a beveled, plate may be employed, and the under flanges alone be stepped; that but one end of the plate need be stepped; or that flanges having one or more of their ends stepped might be applied to a flat plate or to the numerous other constructions of plates then on the market. His top surface construction may be entirely omitted. Disregarding his thirteenth claim, which relates wholly to spike holes, each of his remaining 13 claims covers his lower flanges, and but 4 of them mention his upper flanges. The body of his plate may be changed, or may assume the form shown in some

prior invention, but his stepped form of lower flanges or projections must be used, else his purpose to prolong the life of the tie cannot be attained. The language employed in his patent precludes the substitution for them of any alternative form. To locate his flanges parallel with the rail necessitates an abandonment of the 'prime object' and 'essential idea' of his invention, which he declared to consist in providing a plate having on its under side a series of stepped flanges or projections arranged in a diagonal line with respect to the rail flange."

A reading of the specification discloses very clearly, we believe, that instead of the patent merely describing one invention in which the prime object or essential idea consisted in providing on the under side of the tie plate a series of stepped flanges or projections arranged in a diagonal line with respect to the rail flange, another invention was described, as distinct and separate an invention as if it had been contained in a separate patent, and it is in relation to this additional disclosure that claim 8 and some other claims of the patent were framed. We subjoin Fig. 1 and Fig. 2 of the patent and under headings A and B those parts of the description and also the statements of invention which point to the separateness of the two subject-matters:

Fig. 1.

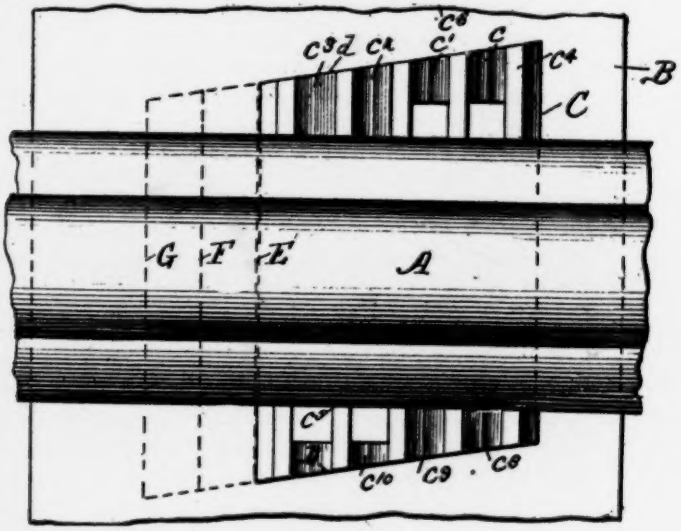
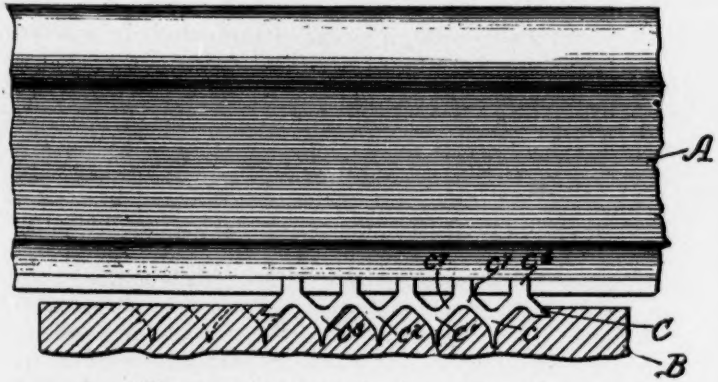


Fig. 2.



A. "In carrying out the invention *A* represents the track rail, *B* the tie, and *C* the tie plate. The plate is preferably, although not necessarily, formed into the shape shown more particularly in Fig. 2, that is to say, what may be termed a trussed shape so that flanges are provided on both the under side as at c, c^1, c^2, c^3 and top side as at c^4. On the top side a way c^5 for the rail or what may be termed the rail seat is provided. The flanges on the under side are preferably shaped with comparatively sharp edges c^6 so that they will readily enter and separate the grain of the tie. As will be seen when in position these under flanges extend parallel with the grain of the tie, the ends being substantially blunt or square and forming abutments to prevent so far as possible the plate from creeping along the tie. It will be observed that by this form of plate there is much less opportunity or chance of buckling than with the ordinary flat plate, since each point where the rail rests upon the plate is supported and trussed by metal which is more or less on edge instead of on its side, thereby forming for each resting point of the rail two girders c^7 joined at the apex by the top flanges c^4 where the rail rests. By the above construction also the wood between the flanges c, c^1, c^2, c^3 will, because of the sloping of the approaching sides of the flanges, be compressed between the flanges, thereby greatly aiding in sustaining the weight put upon the plate, and also in excluding moisture from the wood under the plate.

A form of plate such as I have just described is also of material advantage in that I am enabled to make it much lighter in weight. In this construction of plate with the same amount of material as is ordinarily used in tie plates a much stronger plate is obtained. Heretofore it has been a commercial necessity in order to get the price of plates where they could be sold for use on the cheaper grade of ties, to reduce and diminish as far as possible the material and consequently the weight of the plate. The result has been that with the plate flat and thin it has buckled when the rail pressure has been brought on it thereby damaging the tie as well as rendering the plate useless as a bearing for the rail; but in my construction since the points where the rail rests are supported by metal more or less in upright position the plate is greatly strengthened without addition of weight. So also, by a construction as above, the top of the plate where the rail is seated comprises a series of flat portions with a series of depressions between, so that while there is abundant wearing surface between the rail and plate, there is space for sand, cinders, etc., to work out. Again, these depressions permit the draining off of water and moisture so that in cold weather the top of the plate, particularly the space between the rail and plate, is not covered with ice and the friction between the rail and plate thereby either lessened or obviated entirely."

And it was with respect to the above-quoted particularized description that the patentee made the following general statement of invention:

A. "The invention further contemplates a form of plate provided with top and under flanges which shall be extremely strong in its construction and effective in its designed use, and yet easily rolled or formed into shape as well as very light weight."

And upon this general statement of invention and particularized description the patentee based not only claim 8, which by its terms is not limited to the preferred trussed shape shown in Fig. 2, but also other claims in which the trussed form and other details of construction are covered. Of these latter claims we quote 10 and 11 as illustrative:

"10. A railway tie plate, the body of which is

formed into a series of arches, the lower edges of said arches being provided with tie entering and engaging devices or flanges, substantially as described.

"11. A railway tie plate the body of which is formed into a series of arches the lower edges of which are provided with tie entering and engaging flanges, and the upper side of the plate having a series of depressions vertically above said engaging flanges, substantially as described."

B. "I will now describe the second feature of the invention, viz., the ability to adjust the plate to take up any widening of the gauge due to the lateral movement of the plate and rail. The ends of the engaging flanges on the under side of the plate are regularly stepped or cut on a diagonal line as compared with the rail flange. It is of course obvious that the ends of the flanges might be cut on this diagonal line or the entire end of the plate cut in this way. In my present drawings I have shown the latter construction, the entire end of the plate being sheared diagonally as at *D*." (Then follows a particular description of the stepped flanges on the under side of the plate, which for present purposes can be sufficiently understood from an examination of Fig. 1, after which the specification proceeds.)

"It is obvious that the construction just described is susceptible of many changes, and the prime object of the invention still be attained. For instance, the under flanges might be divided, or instead of flanges they might be merely projections and the plate instead of having its end beveled might be square, and the under flanges alone be stepped; or but a single end of the plate need be stepped; or the flanges having one or more of their ends stepped might be applied to a flat plate or to the numerous other constructions of plates now on the market. In all of the above-named variations the principle employed is the same and each would embody the essential idea of my invention which consists in providing a plate on its under side with a series of stepped flanges or projections that is to say, flanges or projections arranged on a diagonal line with respect to the rail flange."

With respect to the subject-matter of stepped flanges

on the under side of the plate, the inventor made the following general statement of invention:

> B. "My invention has for its object the production of a plate which, while being provided with the top flange to receive the thrust of the rail, is so constructed on its under side that, after it has been moved by the lateral pressure of the rail, it, together with the rail, can be easily moved back to the proper position to maintain the gauge, and be held in that position even more firmly than when originally laid."

And upon this general statement of invention and particularized description the patentee made several claims to features of the stepped flanges on the under side of the plate. We quote claim 1 as an example:

> "1. The combination with the rail and tie of the tie plate provided with a series of stepped tie-engaging flanges or projections on the under side, each arranged to fit into the perforation made by the flange or projection next adjacent, whereby when the plate is shifted transversely of the tie it is also shifted longitudinally thereof, substantially as described."

It is thus made clear, we believe, that a serious error is committed in saying that the stepped flanges on the under side of the plate is the prime object and essential idea of the patent. Undoubtedly such a construction is the prime object and essential idea of one of the two separate inventive concepts disclosed and claimed in the patent. Both inventive concepts contemplate the production of a complete tie plate, and both concepts are embodied in combination claims; but it is only with respect to the concept of stepped flanges on the under side of the plate that the patentee makes the statement that many changes of construction might be made without departing from the prime object of the invention, as for instance applying the stepped flanges to a plate having a flat top.

Turning now to claim 8, we perceive that the subject-matter is a railway tie plate formed on the under side with devices more or less sharpened adapted to penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests. Advantages in having a series of flanges on the upper side of the plate for the

rail to rest upon are clearly pointed out in the part of the specification which we have quoted under the heading A. These advantages are manifestly independent of the character of the tie-engaging flanges on the under side of the plate. Claim 8 very clearly, we think, undertakes to stake out a monopoly of having rail-supporting flanges on the upper side of any railway tie plate on the under surface of which are devices of any sort adapted to penetrate and engage the tie. The objects to be attained by the rail-supporting flanges were separate and distinct from those to be accomplished by the stepped arrangement of the tie-engaging flanges. The mental concepts were different, and their coming into being was in no wise dependent upon each other. Therefore it is inadmissible, in our judgment, to read into claim 8 that part of the specification which is devoted to the stepped arrangement of the tie-engaging flanges and thus limit the right of the inventor to hold a monopoly of the rail-supporting flanges in a railway tie plate unless that tie plate also embodies the independent concept of the stepped arrangement of the tie-engaging flanges.

And inasmuch as it was confessedly old in the art to have on tie plates tie-engaging devices that ran parallel with the grain of the tie and also across the grain, there is nothing in the prior art or in the patent itself that requires the tie-engaging devices of claim 8 to be parallel with the grain of the tie or across the grain, and assuredly nothing that requires them to be the stepped tie-engaging flanges of claim 1.

[2] Nor is the tie plate of claim 8 to be limited to a construction in which the depressions between the rail-supporting flanges are vertically above the tie-engaging flanges, nor to a construction wherein the body of the plate is formed into a series of arches. This is so because the alignment of the depressions on the upper side with the flanges on the under side is covered by claim 11, and the formation of the body of the plate into a series of arches is covered by claim 10; and because in contemplation of law each claim of the patent must be considered as setting forth a complete and independent invention. *Leeds & Catlin* v. *Victor Talking Machine Co.*, 213 U. S. 301, 29 Sup. Ct. 495, 53 L. Ed. 805; *Celluloid Mfg. Co.* v. *Zylonite Brush & Comb Co.* (C. C.) 27 Fed. 291; *Chicago Woodenware Co.* v. *Miller Ladder Co.*,

133 Fed. 541, 66 C. C. A. 517; *Twentieth Century Heating & Ventilating Co.* v. *Taplin, Rice-Clerkin Co.*, 181 Fed. 96, 104 C. C. A. 156. To construe claim 8 as being the same as either claim 10 or claim 11 would be to declare claim 8 void as a duplication. Such a course should not be pursued unless it cannot fairly be avoided. In the present instance not only can it fairly be avoided, but further, the specification clearly requires a differentiation of claim 8 from the other claims of the patent. In quotation A the patentee shows that the form portrayed in Fig. 2 and particularly described by reference letters was only the preferred form—preferred because, while embodying the general characteristics and the law of the structure covered by claim 8 with respect to rail-supporting flanges on the upper side of a plate having on its under side any sort of tie-engaging devices, it also enabled the maker to embody at the same time the stepped arrangement of the lower flanges described and claimed in other parts of the patent.

We therefore conclude that the Patent Office was right in determining that there was a sufficient description and disclosure of invention to support claim 8 as presented; and, further, that claim 8 should be given its prima facie value unless matters outside the patent make such a construction impossible.

[3] 2. A contention is made that the association of elements in claim 8 does not constitute a true mechanical combination, but is merely an aggregation. In *Pickering* v. *McCullough*, 104 U. S. 310, 318, 26 L. Ed. 749, the one statement of Mr. Justice Matthews that, "in a patentable combination of old elements, all the constituents must so enter into it as that each qualifies every other," if separated from the context and taken to mean that the natural action of each element must by the action of the other elements upon it be converted into some sort of action other than its natural action, seems to have gone too far. The Patent Office has continued to grant and the patent courts have continued to sustain combination claims on the theory that it is sufficient if the elements are associated in a unitary structure and there co-operate to produce either a new mode of operation or a new result or the old result in a modified and improved way. In *Oshkosh Grass Matting Co.* v. *Waite*

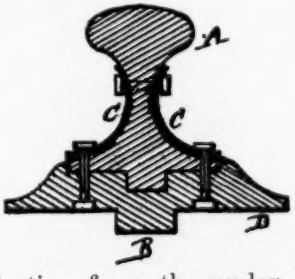
Grass Carpet Co., 207 Fed. 937, 125 C. C. A. 385, we upheld, against the defense of aggregation, in a machine for making grass twine, claims for combinations of "means for forcing the material forwardly, a funnel into which the material is received, compression-rolls adapted to receive the material therebetween after said material leaves the funnel, and means, after the material is compressed, for wrapping a twine therearound," although it is apparent that the natural action of the feeding means could not be changed into some other sort of action by the subsequent action of the compression-rolls or by the still later action of the twine mechanism. In short, the action of no one of the elements could or did in anywise affect the inherent law of action of any of the other elements. But because the grass twine machine was a unitary structure and because all of the elements co-operated to produce an improved grass twine, the defense of aggregation was overruled. And in *Krell Auto Grand Piano Co.* v. *Story & Clark Co.*, 207 Fed. 946, 125 C. C. A. 394, citing *Burdett-Rountree Mfg. Co.* v. *Standard Plunger Elevator Co.*, 196 Fed. 43, 197 Fed. 743, 117 C. C. A. 206, and other cases, we upheld, against the defense of aggregation, in an automatic player piano, claims for the combination of the controlling levers with the fall-board, although no coaction between those elements was possible except through the mediation of the operator. In the instant case there is a unitary structure in which all of the elements of claim 8 co-operate to produce a new tie plate with new and improved qualities. We are therefore of the opinion that, if claim 8 is to be overthrown, it must be on account of some other defense.

[4] 3. The utility of the invention is abundantly demonstrated by the instant and growing demand, amounting at the beginning of this suit to over 40,000,000 plates a year, and is further shown by appellees' move to share in this commercial success in the face of the certainty of vigorous and expensive litigation. This last-mentioned fact might also be taken as sufficient to evince the novelty of appellant's structure, since appellees probably would not venture on the possibility of being convicted of trespass if they could have found upon the public commons what would serve their com-

mercial purposes. And an examination of the 70-odd patents in the record leaves no doubt that appellant produced something that in fact was new. The real question at this point in the case is whether the inventive faculty or no more than the skill of the mechanic was employed in producing the new thing, for, as declared in *Bates* v. *Coe*, 98 U. S. 48, 25 L. Ed. 68, anticipation or denial of novelty of a combination claim cannot be based upon picking and choosing pieces here and there from prior patents and publications and thus showing that each of the elements was old. The real test is whether the mental concepts that are distinctly disclosed in and by the laws of the prior nonanticipatory patents and publications left no room for a new and independent mental conception in bringing into working form the new machine or product or process under investigation.

An analysis of all the prior patents we deem unnecessary. If the strongest references cannot prevail it would be profitless to review the others. Two classes of references will be noticed, rail chairs and tie plates:

(a) Patent No. 142,020, August 19, 1873, to Hudson, and patent No. 203,570, May 14, 1878, to Wells are the strongest references of the rail chair class. Fig. 2 of the Hudson patent is as follows:



[8] The projection from the under side of the rail chair is not a device "more or less sharpened adapted to penetrate and engage the tie"; it is a heavy rectangular rib made to fit snugly into a corresponding depression cut into the tie in advance. And the upper side of this Hudson chair is not provided with "a series of flanges on which the rail rests" for the depression in the upper surface of the chair so corresponds with the snugly fitting rib depending from the rail that the rail throughout its breadth is seated in uniform contact with the chair.

The Hudson patent, in our judgment, furnished no light to those concerned with the problem of producing an efficient tie plate. As wooden ties became more and more expensive and as rails and trains and traffic became heavier and heavier, the cutting of the ties by the action of the rail flange due to the wave motion of the track became a very serious matter. The shingles or flat plates of wood with which the practical tie plate art began were soon found to be insufficient. These were succeeded by flat plates of iron, and down to Wolhaupter's time the best that the practical art had was an iron tie plate having a flat upper surface and having tie engaging projections on the under side. Physical exhibits in this case show that these flat plates became warped or worn through in a comparatively short time. The wearing relation between the rail and tie plate is the same as between the rail and the tie; but with rail chairs the situation is different. "Rail chairs" are devices used where the ends of rails come together; they are intended to hold the separate rails firmly together and in alignment and so give them as far as possible the effect of being one continuous rail; they are bolted or otherwise permanently and securely affixed to the rail; and so, as far as cutting or grinding action between the rail and the tie caused by the wave motion of the track is concerned, they belong with the rail. Tie plates are intended to protect the wooden ties from being worn and cut by the action of the flange of the T-rail due to the wave motion of the track; they are laid upon the surface of the ties and are attached thereto by means of tie-engaging projections; spike holes are provided in the plates through which are driven the spikes whose heads clamp over the flange of the T-rail; and so, as far as cutting or grinding action between the rail and the tie caused by the wave motion of the track is concerned, they belong with the tie. And thus, due to the wave motion of the track, water and sand or grit would get in between the rail and the surface of the flat tie plate and would grind and destroy the metal. This was a known condition of the practical tie plate art; but the record does not show that this same condition had to be met by workers in the rail chair art, and the law of the rail chair structure would seem to exclude it; and it was not until after Wolhaupter's disclosure that any me-

chanic, expert or otherwise, claims to have discovered in the 22 year older Hudson patent any instruction regarding the way in which to build an efficient tie plate.

Figs. 1 and 3 of the Wells patent are as follows:

Fig. 1.

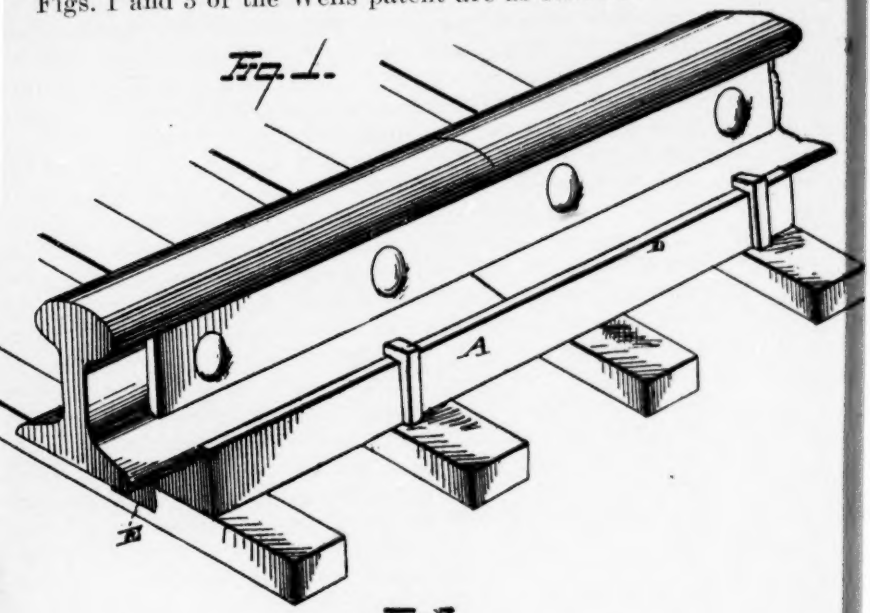
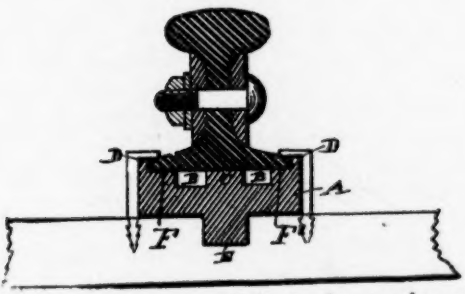


Fig. 3.



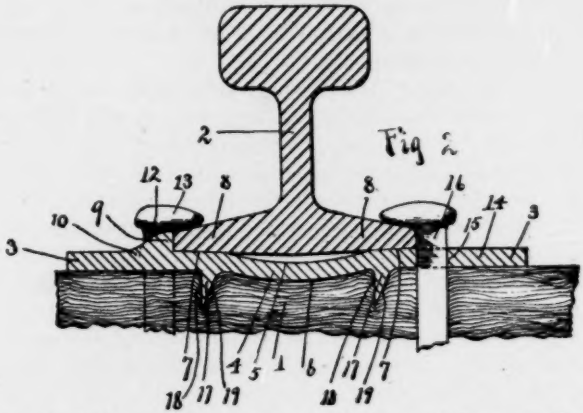
This chair, as Wells directed it to be made, extends over four ties. The depending rib *E* is not a device "more or less sharpened adapted to penetrate and engage the ties"; it is a rectangular projection, about one-half as broad as the head of the rail, and made to fit

snugly into a prepared channel cut across the body of the tie; the channel in the tie is of such a depth as manifestly to weaken it; the purpose of the depending rib is to prevent lateral displacement of the chair and to impart increased strength and stiffness to the central portion of the chair; this strengthening function is called into play where the depending rib acts as a girder from tie to tie; and it is therefore a clear departure from the law of the structure to cut from Wells's chair a piece the width of a tie and then call the rib or girder *E* a device in a tie plate adapted to penetrate and engage the tie. The rail is supported upon the ledges *F*, F^1, and *C*. These ledges result from the presence of the grooves *B* which, as the patentee says, enable the chair to be made much lighter than the ordinary chair and which also serve as receptacles for sand and grit which may enter between the chair and the rail. But inasmuch as Wells's device was a rail chair extending over four ties, a distance of about 5 feet, it seems fairly clear to us that Wells never had in mind, and the record does not show that the railway chair art was ever concerned with, overcoming the emery-like grinding and cutting action upon the tie or upon armor on the tie as that action is brought into play upon the ties successively by the wave motion of the track. For though Wells's chair may not be as securely and inevitably made a part of the rail as is the case with Hudson's chair, yet it is clear that Wells intended the law of his structure to be that the chair should be part of the rail, just as a tie plate is a part of the tie. The sides *D* extend up flush with the upper surface of the flange of the rail; the spikes shown in Fig. 3 and described in the specification are not the ordinary rail spikes, but are specially made of such a width as to lock the rail into the chair; and, though this locking might not be as efficient as the permanent bolts in the Hudson chair which was of no greater length than the width of the tie, yet by reason of the greater length of the chair as specified by Wells, probably the locking was in fact just as effectual, and there is no doubt that Wells intended the rail to be locked securely in the chair. If this is so, then the upper surface of the tie plate of claim 8 was distinctly novel in itself. But this is not vital to the validity of the claim. The claim is for a combination, and it is very evident that the de-

es of both Hudson and Wells would have to be re-
signed, reorganized, and rebuilt in order to bring into
istence the combination of claim 8. That something
ore than the skill of a mechanic who was acting in the
e of the teaching of these patents was required to pro-
ce the efficient tie plate of claim 8 might be inferred
om the great lapse of time between Hudson and Wells
d the disclosure of Wolhaupter, during which time the
ed of an efficient tie plate was recognized by many
illful persons engaged in improving the roadbeds of
ilroads; but the fact is really demonstrated by the
actical development of the tie plate art.

(b) Prior to 1870 the tie protector was a wooden
ingle or plate. From about 1870 to 1880 a simple metal
late with flat top and flat bottom was used. Between
80 and 1895, when Wolhaupter made his disclosure, a
annel plate of equal thickness throughout which fitted
er the tie like a cap, a flat topped plate with tie-en-
aging devices on the bottom, a plate flat on the top and
ttom with a shoulder on the top to resist lateral pres-
re of the rail, and the same sort of a plate with tie-
ngaging devices on the bottom, were in actual use; but
ever prior to Wolhaupter had the tie plate of claim
been produced. And since then the entire development
as been along the line of improving the tie plate of
aim 8. If the redesigning and reorganization of the
il chairs of Hudson and Wells was so obvious, why
id not some one of the many men who were interested
the improvement of the roadbeds of the 1,300 railroads
f our country bring forward this combination which has
roven to be so desirable?

In addition to the prior practical art, some prior pat-
nts need to be noted. Fig. 2 of the Goldie patent, No.
85,030, October 25, 1892, is as follows:



The draftsman has indicated a space between the bottom of the rail flange and the top of the central portion of the tie plate, but this is contrary to the intention that Goldie had in mind. He points out that the under surface of the rail flange is slightly raised in the middle and that the depression in the tie plate is made to accommodate the bottom of the rail so formed, and in this way a firm and solid bearing for the rail is afforded throughout the width of the rail flange. Physical exhibits showing the result of the actual use of this tie plate demonstrate that Goldie's idea accorded with the fact, and that the rail actually bears fully upon the tie plate throughout the width of the rail flange. The manufacture of this plate, as the patentee thereof himself testified, was abandoned, and its use was entirely superseded by the Wolhaupter plate.

Patent No. 494,692, April 4, 1893, to Reece, is for a method of making railroad tie plates. At one step in the process of manufacture there are flanges at each edge which might be rail supports if they were left in the completed plate. But the next step in the manufacture cuts away these flanges at the part where the rail is seated, and the rail rests upon the flat surface of a plate of uniform thickness, except that there are two holes left in the plate by the process of cutting away the flanges. It is difficult to see how Reece, by cutting away what otherwise might be rail-supporting flanges, was instructing the ordinary mechanic how to make a tie plate hav-

ing on its upper side a series of flanges on which the rail rests, much less instructing him in regard to the desirability of such flanges.

Wilson's tie plate, described in patent No. 522,867, July 10, 1894, is made in several pieces. One part of Wilson's tie plate, by reorganizing it in the light of Wolhaupter's disclosure, might be made into something similar; but, when the whole plate is put together as Wilson instructed it to be, the rail rests upon a flat plate of uniform thickness throughout.

So far there has been found in neither the practical nor the paper prior art any tie plate which approached the idea of having rail-supporting projections upon the upper surface of a plate. Figs. 1 and 4 of the Dunham patent No. 469,386, are as follows:

FIG. 1.

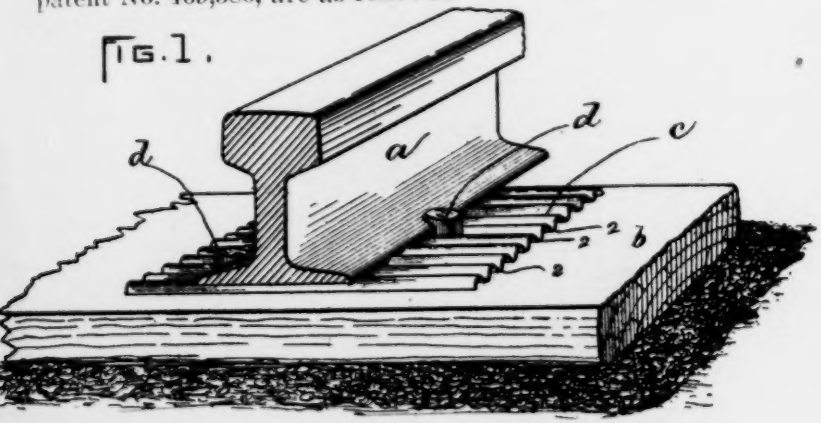


FIG. 4

This corrugated plate is of uniform thickness throughout. Two purposes were to be served by the corrugations: First, the patentee says that a corrugated plate three-sixteenths of an inch thick will be stiffer and better adapted to resist the bending or buckling strain to which it is subjected by the weight of the rolling stock than a flat plate which is five-eighths of an inch thick. This tie plate never made any appearance in the practical art. The testimony of practical men convinces us

that Dunham's three-sixteenths of an inch material would either break or flatten out under the weight to which it would have been subjected in actual use at the date of the application, and since that time the strains have greatly increased. Second, the corrugations were to afford air spaces between the bottom of the plate and the tie to obviate the decay of the wood. Regarding the bottom formation of this tie plate of uniform thickness, it is to be noted that the corrugations could not be tie-penetrating and tie-engaging devices, else the air spaces would be lacking and the plate would fit tightly upon the wood as in Wolhaupter's plate. Regarding the upper surface, no suggestion with respect to the corrugations is made except that thus the plate may be made lighter and stronger. And that the character of the upper surface was not material is shown by the patentee's statement in connection with Fig. 4 that a plate with a flat upper surface corresponds fully to his invention. In our judgment nothing in this paper patent corresponds in letter or in spirit to the tie plate of claim 8.

[5] 4. The law which we believe is applicable to these facts has been frequently declared and may be briefly summarized. Invention of a combination does not lie in gathering up the elements that are employed, but consists in first conceiving that a new and desirable result may be attained by bringing about a relationship of elements which no one has before perceived and then going forth to find the things that may be utilized in the new required relationship. In an old and well-developed field the apparent simplicity of a new device is often the highest evidence of inventive genius. So far as human minds are able, judges should exclude from view the disclosure of the patentee, should regard the patentee's problem as of a time antedating the application, and should therefore not too readily accept the *ex post facto* wisdom of the bystander. Prior art structures are to be examined in view of the purposes and laws of such structures. It is not enough that a prior art device approach very near the idea of the patent in suit; it must so clearly disclose the idea that it would be apparent to a mechanic of ordinary intelligence who was not examining the device for the purpose of discovering in it the idea of the patent. For, if he already had that idea, he would

not be getting it from the prior art device, but from his own imagination or some other source. *Clough* v. *Barker*, 106 U. S. 166, 1 Sup. Ct. 188, 27 L. Ed. 134; *Topliff* v. *Topliff*, 145 U. S. 156, 12 Sup. Ct. 825, 36 L. Ed. 658; *Potts* v. *Creager*, 155 U. S. 597, 15 Sup. Ct. 194, 39 L. Ed. 275; *Diamond Rubber Co.* v. *Consolidated Tire Co.*, 220 U. S. 428, 31 Sup. Ct. 444, 55 L. Ed. 527; *Ryan* v. *Goodwin*, 3 Sumn. 514, Fed. Cas. No. 12,186; *Regent Mfg. Co.* v. *Penn. Elec. Co.*, 121 Fed. 80, 57 C. C. A. 334; *Faries Mfg. Co.* v. *Brown & Co.*, 121 Fed. 547, 57 C. C. A. 609; *Ideal Stopper Co.* v. *Crown Cork & Seal Co.*, 131 Fed. 244, 65 C. C. A. 436; *Wm. B. Scaife & Sons Co.* v. *Falls City Woolen Mills*, 209 Fed. 210, 126 C. C. A. 304.

[6, 9] Another consideration is the presumptive validity of a patent. From long and continued repetition of the phrase the members of the patent bar and of the patent bench sometimes may seem to get into the condition of the man who repeats a word over and over until it fails to convey any meaning to his mind. But this presumption should be given more than formal recognition. A "patent" is a contract between the government on behalf of the people and the patentee. The grant of a patent might have been made conclusive evidence of its validity except against suits by the government for fraud or mutual mistake in the issuance. But the fact that certain defenses are left open to the individual should not make us lose sight of the nature of the presumption that attaches to the grant. Not merely has the application been examined on behalf of all the people by experts who have access to all the prior patents and publications of the world; not only has the applicant spent his time and invested his mony in procuring the patent; but in most of the important cases the patentee and those working under him have invested very large sums in buildings and machinery and have expended other large sums and put in great energy and effort to build up, by advertising and salesmanship, a profitable business. And this is done before any one challenges the presumptive validity of the patent. Courts therefore should not view the application as of the date of its filing and constitute themselves into a board of reviewing examiners and on nicely balanced considerations find that the Patent Office examiners were in error; but they should consider the pat-

entee's equities in his business which has developed under the presumptive validity of the patent, should give heed to the place achieved by the patented article in the field of practical art since the date of the patent, and should therefore decline to sustain the defense of non-invention and to strike down the patent and the business built upon it unless that defense has been established beyond a reasonable doubt. In this case we find that the appellees have not so maintained their defense.

[7] II. Claims 1, 2 and 3 of the second patent read as follows:

> "1. A railway tie plate provided on its upper side with one or more flanges on which the rail may rest or by which it is directly sustained and on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, substantially as described.
>
> "2. A railway tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained and on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter and sharpened to permit them to readily enter the tie, substantially as described.
>
> "3. A railway tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained, on the under-side with one or more sharpened tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, and on the upper side with an additional flange or flanges extending above the plane of the rail-sustaining flanges and adapted to receive the lateral thrust of the rail, substantially as described."

In the prior art the nearest reference is the first Wolhaupter patent, which shown a tie plate having rail-supporting and tie-engaging flanges. The claims now in question are for a specific and limited improvement of the first Wolhaupter tie plate. By limiting the construction to one wherein the tie-engaging flanges are parallel with and directly beneath the rail-supporting flanges greater strength was obtained. Nothing in the prior art anticipates this particular construction. Of course the idea

may be the same as that which induces the placing of the columns on one floor of a building immediately beneath the columns on the upper floor. But the question here, as was the case with the first patent, is one of invention, whether it involved more than mechanical skill to perceive that such a general strengthening principle might be brought into the relationship between the elements of a tie plate, and then practically to organize the new structure. The prompt acceptance of this idea, the commercial success to which this idea has contributed, and the fact that seven years elapsed after Wolhaupter had disclosed the general combination before any of the numerous engineers interested in railroad construction perceived the possibilities of such a relationship, lead us to resolve any doubt that might be created by the apparent simplicity of the step, in favor of the validity of the patent.

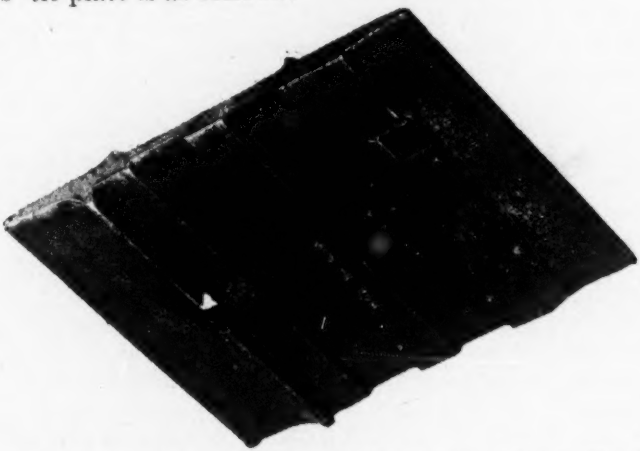
III. Claims 7 and 9 of the third patent are in these words:

> "7. A tie plate provided in its rail-supporting surface with transverse grooves or channels, and at one margin of said supporting-surface with a transverse rail-abutting shoulder."
>
> "9. A tie plate provided in its rail-supporting surface with transverse grooves or channels, reaching to the edge of the plate, and at one margin of said surface a transverse rail-abutting shoulder."

Here again is a specific and limited improvement upon the original Wolhaupter tie plate. The invention does not consist in putting a rail-abutting shoulder upon a tie plate. And the concession that rail-abutting shoulders were old in the tie plate art presents no obstruction to the validity of a claim in which the rail-abutting shoulder is one of several elements. In this instance, also, the question is whether invention was involved in producing this specific and limited combination. No prior structure of the practical or of the paper art either meets these limited claims or suggests, out of all possible relationships of the elements, the particular relationship that is here claimed. For the reasons stated in connection with the other patents we are unable to find that the defense of noninvention is properly sustained.

IV. In developing its commercial tie plate, appellant dropped from view many of the separate inventions embodied in other claims of these patents; but it brought

into one structure the several inventions of the claims in suit. We have found that none of these claims is nullified by the prior art or limited by anything more than its own terms. So respecting infringement the question is whether these claims read upon the structure put forth by the appellees. A photographic reproduction of appellees' tie plate is as follows:



As this tie plate is substantially a copy of appellant's commercial structure, the real inquiry is whether appellant has abandoned its own inventions. To us it seems clear that this tie plate responds in letter and in spirit to the terms and meaning of the claims in suit. We have no difficulty in perceiving a railway tie plate formed on the under side with devices more or less sharpened adapted to penetrate and engage the tie and on its upper side with a series of flanges on which the rail rests. We also observe that the tie-engaging flanges extend parallel with and are directly beneath the rail-supporting flanges. It is likewise obvious that there is the specific and limited relationship of having the rail-abutting shoulder at one margin of and parallel with the rail-supporting flanges and of having both the rail-abutting flange and the rail-supporting flanges transverse to the tie.

The decree is reversed, with the direction to order an accounting on the claim of the first patent and to enter an injunction and order an accounting on the claims of the second and third patents.

Office Supreme Court, U. S.
FILED
MAR 8 1915
JAMES D. MAHER
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No. 825 [redacted] 67

IN THE

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, A. D. 1914.

THE HART STEEL COMPANY and GUILFORD S. WOOD, *Petitioners,*

vs.

THE RAILROAD SUPPLY COMPANY, *Respondent.*

Petition for Writ of Certiorari to the Circuit Court of Appeals of the United States, for the Seventh Circuit.

Brief in Opposition to Petition for Certiorari.

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BARNARD & MILLER PRINT, CHICAGO.

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IN THE

Supreme Court of the United States.

OCTOBER TERM, A. D. 1914.

THE HART STEEL COMPANY and GUILFORD S. WOOD, *Petitioners,* vs. THE RAILROAD SUPPLY COMPANY, *Respondent*	Petition for Writ of Certiorari to the Circuit Court of Appeals, of the United States, for the Seventh Circuit.

BRIEF IN OPPOSITION TO PETITION FOR CERTIORARI.

MAY IT PLEASE THE COURT:

The petitioners come before this court complaining that the Circuit Court of Appeals for the Seventh Circuit has committed obvious and palpable errors:

First, in refusing to grant petitioners' motion to dismiss the appeal in this case (Par. 12, i, j, k, p. 14, Petition); and,

Second, in considering that appeal on the merits, and in deciding contrary to the decision of the Circuit Court of Appeals for the Sixth Circuit, by holding the three Wolhaupter patents valid and the claims thereof in issue to be infringed. (Par. 12, a, b, c, d, e, f, g, h, p. 14, Petition.)

In opposing the petition, the respondent respectfully submits the following:

I.

No petition for a rehearing was filed.

The petitioners have brought the matter to this court without applying to the Circuit Court of Appeals for the Seventh Circuit for a rehearing to correct such alleged errors. This course of procedure seems wrong. If petitioners are correct in their assertion of obvious error, they should have petitioned that court for a rehearing, before applying for a Writ of Certiorari to this court. They have mistaken their remedy.

This court, we respectfully suggest, may not care to assume that the Circuit Court of Appeals for the Seventh Circuit would have refused to correct an obvious error in its decision had it been given the opportunity to do so.

II.

The diversity of rulings of the two Circuit Courts of Appeal is upon matter of law and this petition should be denied if the later decision correctly states the law,

Petitioners have pointed out that the decision of the Seventh Circuit Court is different from that of the Sixth Circuit (Par. 10, p. 11, Petition), but they have failed to call the attention of this court to the fact that the *principal ground of divergence* between the decisions of the two courts and upon which the conclusion of each court rests, is based upon a matter of law.

The Court of Appeals for the Sixth Circuit, as this respondent contends, was misled into a misconstruction of the principal patent relied on. It attributed to the invention covered by Claim 8 of Wolhaupter's Patent No. 538,809, an entirely erroneous character; this error of the Court of Appeals arising from a misconstruction, as matter of law, of the Letters patent.

The Circuit Court of Appeals for the Seventh Circuit attributed the proper character to the patented invention. It reached, as matter of law, a different result and gave a proper construction to the letters patent.

The reaching of different results by two Circuit Courts of Appeal is not, *per se*, a sufficient ground for the granting of a Petition for Certiorari.

From a reading of the opinions of the two courts of appeal and the patents in issue, [set forth in full in the petition, Exhibit C. p. 30 and Exhibit D. p. 42], and without a re-examination of the entire records, this court can determine whether or not the decision in the Seventh Circuit case, in which the petition is filed, is correct as matter of law. If our contention is right, then it is immaterial whether or not the Sixth Circuit Court of Appeals (from which no Petition for Certiorari is pending), has made an erroneous decision as to the same matter of law. In such case, no matter of public policy or private interest requires the action of this court to harmonize the two decisions by a consideration of this case on the merits. A denial of the petition in the instant case will leave the decision of the Seventh Circuit Court stand as the law in the matter. The petition should therefore be denied.

III.

Petitioners' Brief.

The brief of counsel for petitioners, pages 8 to 51 inc., deals with the case as though the entire record was now before this court for consideration upon the merits. We shall not reply herein to this part of petitioners' brief.

In this brief we will not go into the question of the validity of the patents involved since, if our position is correct, the petition will be denied. If, in the judgment of this court, the petition should be granted, the question of validity will more properly come before this court at the hearing upon the merits.

For the purpose of the present proceedings, the respondent is quite content to rest upon the decision of the Circuit Court of Appeals for the Seventh Circuit (Petition p. 47). That decision was apparently written with great care, with due appreciation of the gravity of the situation and of the fact that that court, in announcing its opinion, was required to dissent from the conclusion reached by a co-ordinate court. It so states in the first paragraph of its decision.

IV.

Inaccurate statements, by petitioners.

We desire to call attention to certain misstatements or at least inaccuracies of statements of fact made by the petitioners:

(A) The alleged guaranty by the Atchison, Topeka & Santa Fe Railway Company.

> "Said railroad company was not made a party defendant of record in either instance, but has assumed and conducted the defenses in both suits by *reason of a guaranty given the defendants* in said proceedings *against liability* for infringement of Letters Patent, and is *therefore bound* by each of said decisions." (Fourth Sub-section, par. 1, page 2).

The italics are ours. This is repeated in the brief where counsel asserts that the Santa Fe Railway Company "agreed to protect maker and agents against loss by patent infringement and to handle any such litigation by its attorney and under its direction." (Brief, p. 1 and 2). Again, the assertion is made that the Santa Fe Railway Company "with the knowledge of the complainant and in compliance *with its guaranty,* assumed and conducted the defense of both suits." (Brief p. 2, lines 9-23).

This misleading statement is, in substance, also made at the close of par. 6, p. 8 of the petition, by the words: "of the common defense of the proceedings by the Atchison, Topeka and Santa Fe Railway Company;" and the words: "of the defense of the Atchison, Topeka and Santa Fe Railway Company of both suits," (middle par. 7, p. 9.) It is substantially made also in the petitioner's brief in the middle of page 2 and again near the bottom of page 6.

There is nothing in the record to show a guaranty by the Railroad Company to the defendants or to hold them harmless or to protect them from liability or even to assume direction and control of the defense in either suit. If true, however, it would be

quite immaterial, *since the Santa Fe Railway Company is not a party to either suit.*

There is nothing in the record to justify these assertions of the petitioners. The only evidence in the record upon the subject was brought out only after a *subpoena duces tecum* had been served upon one W. S. Miller, president of the Elyria Iron & Steel Company. All this evidence is contained in two letters,—one, dated August 27, 1908, addressed by the Santa Fe Railroad Company to The Hart Steel Company (Rec. p. 1350-51, also p. 2198), and the other addressed to the Railroad Company by the Hart Company dated September 1, 1908. These are contained in the statement of counsel on pages 1349-50-51 of the record.

Neither shows that the railroad company had any contractual relation with The Elyria Iron and Steel Company, the Sixth Circuit defendant, or that it guaranteed said Elyria Company from liability, or that it was bound to or that it did assume, control and direct the defense of the Sixth Circuit suit. There is not a shadow of proof in the record in either suit, that the Santa Fe Railway Company had agreed to be or would have been bound by the Sixth Circuit decree, had it been in favor of the Railway Supply Company.

Again, the two letters referred to (Rec., pp. 1350-1), were between The Hart Steel Company and the Santa Fe Railway Company. The Elyria Company was not included in nor protected by any written or other contract of guaranty. The petitioner, Guilford S. Wood, was not included in any contractual or other relation created by these letters.

He was no more protected than was the Elyria Company.

(B) Conduct of both suits by same counsel.

The petition and brief each repeatedly assert that the Santa Fe Railway Company actually conducted the defense of both suits. It is true that Mr. Frank F. Reed, counsel for the petitioners, has appeared and taken part in the conduct of both suits. The *only* thing in either record to show any possible relation between him and the Santa Fe Railway Company, however, is found in the *single statement* of Mr. Reed, reading as follows: "Mr. Frank F. Reed has been *retained* by the Atchison, Topeka and Santa Fe Railroad Company as counsel in these cases." (Rec., p. 1451.) *This is not proof* that the railroad company has, at its own expense, assumed, conducted and controlled the defense of both suits or of either of them.

While it is a fact that the Santa Fe Railway Company "retained" Mr. Reed in both cases and that Mr. Reed participated in the Ohio case, there is no proof of any contractual or other relations between the railroad company and the Elyria Company. There is no proof that either of the present petitioners had any participation in the Ohio case. There is no proof that the defendant in that case had any participation in the case at bar. There is no proof of any "exclusive direction and control" by the Santa Fe Company of either case. There is no proof that Mr. Reed, the attorney retained by the Santa Fe, was paid for his services by that company. There is no proof that the Santa Fe Company paid

anything more than a retainer fee and merely contributed the amount of that fee, and that only, as an interested and sympathetic non-participant. There is no proof that, notwithstanding the payment of his retainer fee by the Santa Fe Company, Mr. Reed was not acting under the exclusive direction and control of the Elyria Company, so far as its suit was concerned, and under the exclusive direction and control of these petitioners, so far as their suit was concerned.

(C) Allegations in the bill of complaint as to Infringement.

The petitioner does not correctly state the allegations as to infringement contained in the bill of complaint, in the statements near the bottom of page 2 and the first three lines of page 3. The allegations are simply those usually found in bills based upon the manufacture, use and sale of a patented invention. The respondent's bill does not allege that the infringement was "by reason of the *sale*" to the Santa Fe Railroad, or that the plates were manufactured by the Elyria Company and sold through The Hart Steel Company.

The bill simply alleged the manufacture and sale of tie plates embodying the invention, and made no reference to a "five thousand ton lot" or any other particular number, or to selling agents or to the railway company.

Again, in paragraph numbered 2, beginning near the bottom of page 3 of the petition, a similar misleading statement is made concerning the allegations of infringement in the suit against the Elyria Iron and Steel Company. No such allegation was made.

Again, the statement is made that the Elyria Company "was made defendant *as* maker and seller" of a particular lot of five thousand tons of tie plates; that petitioner, The Hart Steel Company, was made a defendant "*as sales agent* of the Elyria Iron and Steel Company," and that petitioner, Guilford S. Wood, was made a defendant "*as its* representative," *i. e.*, the representative of the Elyria Company. (Petition, par. 6, p. 7.)

No such allegations are to be found in the bill of complaint in either case. There is nothing in either of the bills of complaint indicating any privity between the several defendants.

(D) Order not given nor payment for infringing tie plates made to Elyria Iron and Steel Company.

Counsel goes outside the record also in paragraph 8 on page 9 of the petition. The record *does not* show that "the contract" for the infringing tie plates "was taken in the name of the Elyria Iron and Steel Company," nor does it show said plates "were billed directly by the Elyria Iron & Steel Company to the Railroad Company."

Neither does the record show that "the purchase price was paid directly to said Elyria Iron & Steel Company." These statements are misleading and indicate the extremity to which the petitioners are put in coupling up the Santa Fe Railway Company with the defendants in the two suits in an attempt to show privity of interest.

(E) No injunction issued against the Santa Fe Railway Company.

Counsel asserts that the injunction directed by the Circuit Court of Appeals for the Seventh Circuit "will be enforced" not only against the petitioners but *also* "against said Atchison, Topeka and Santa Fe Railway Company" and that the latter cannot continue to use the infringing tie plates "without liability for attachment and punishment for violating the said injunction." (Petition, Par. 10, p. 12.)

No injunction has been ordered or issued directly or indirectly against the Atchison, Topeka and Santa Fe Railway Company, nor is said company or its officers or attorneys, agents or workmen, or any of them, a party to either suit.

Moreover, counsel admits the fact that the Santa Fe *"Railroad Company was not a party to either proceeding"* (Brief p. 2, line 19), and yet on page 6 of his brief, the assertion is made (as also in the Petition), that the Santa Fe Company is "both liable for damages on accounting and subject to punishment for violation of the injunction."

Since the record does not show any contractual obligation upon the Railroad Company to pay any judgment that may be entered against the petitioners or either of them,—since the record does not show any privity between the Railroad Company and any of the defendants,—and since the Railroad Company is not a party to either suit, it follows that the supposed interests of the Railroad Company may not be properly urged here in support of this

petition and, although urged, afford no justifiable grounds for granting the writ.

(F) Design of the infringing tie plate.

In paragraph 11 beginning on the bottom of page 12, counsel state:

> "The form of the tie plates embodied in the device sold by defendants is a practical and valuable form which petitioners claim was actually devised, as shown by the record in this case, not by the Railroad Supply Company or Benjamin Wolhaupter, the patentee, or at their suggestion, or by any person connected with either, but by railway engineers, etc." (Pet. p. 12-13.)

This statement is also repeated in substance in the brief, pages 41-42 and 45-46. In view of the fact that we are not replying in this brief to the merits of the case, the statement of petitioners' counsel just quoted would be unimportant and immaterial. It must be noticed, however, lest by remaining unchallenged, this court might gain the impression that the respondent was seeking to embrace within the scope of its patents, a *design* of tie plate produced subsequent to the patent and by the engineers of the petitioners.

There is some testimony in the record showing that the engineer of the Santa Fe Railroad Company, Mr. Story, worked about a year and a half on special designs for a tie plate to be adopted by the Santa Fe System as its standard and that in September, 1908, the design of the infringing tie plate was selected. The fact is, however, that the design of this plate is precisely identical with a sample plate made in May, 1908, *by the complainant* and handed to Mr. Hodges, the purchasing agent of the

Santa Fe System by Mr. E. H. Bell, the vice-president of the Railroad Supply Company. After thus seeing the plate first made by the respondent company, Mr. Story adopted it in September, 1908, but instead of purchasing of the respondent, the order for the *first* lot used was placed with the Hart Steel Company—hence the infringement and this suit. (Hawley Dep. R. 72. Bell Dep. R. 148.)

It is not fair, therefore, for counsel to make the assertion above referred to, when the record does not bear him out and when such statement, unchallenged, might tend to the prejudice of the respondent's position, particularly on the question of originality of design.

(G) Among other errors, we point out the following:

On page 2 of the brief in support of the Petition, the counsel confuse the dates with respect to the bringing of these suits.

The suit against the petitioners was commenced in the Seventh Circuit by the filing of the Bill on December 11, 1908, and the suit against the Elyria Iron & Steel Company in the Sixth Circuit was commenced December 9, 1908, although in his brief, counsel for petitioners fixes the date as March 26, 1909. For what purpose this misstatement of fact is made, we do not understand.

Again, on page 2 of the brief, counsel state that the suit in Illinois was brought on "Letters Patent for tie plates issued to Benjamin Wolhaupter on December 9, 1908," what counsel should have said, and probably intended to say, was that the Ohio suit

was brought December 9, 1908, since the Letters Patent to Wolhaupter on which suit was brought were granted in the years 1895, 1902 and 1903 respectively.

In the following pages, we shall briefly address ourselves to the two propositions advanced in the petitioners' Brief:

V.

Res Adjudicata.

Under this heading the Brief submitted on behalf of the Petitioners shows that the Seventh Circuit Court of Appeals overruled a motion to dismiss the appeal upon the ground of estoppel, and error is assigned because said motion was overruled. (Petn., par. 12, i, j, k, p. 14.)

The basis of the claim of *res adjudicata* is the decree in the Sixth Circuit case and the alleged privity between the defendants therein, the Petitioners in this case, and the Santa Fe Railway Company.

The decree in the Ohio case protects the parties thereto and their privies, but a privy, as defined in the decisions, means one who participated in, or controlled and directed, the defense of that suit. No such state of facts is shown by the Petition nor by the record herein.

The following facts appear from the record:

First. The Hart Steel Company, one of the Petitioners, and the Elyria Iron & Steel Company, the defendant in the Sixth Circuit suit, are entirely *separate and distinct corporations,* organized under the laws of and citizens of different states.

Second. The suit in Ohio was against the Elyria Company, a *manufacturing* corporation, while the present suit is against The Hart Steel Company, a *mercantile* corporation.

Third. There is no proof that the Hart Steel Company participated, financially or otherwise, in the defense in the Ohio suit, or that it directed and controlled such defense, either directly or indirectly. Neither is there any proof that the Elyria Iron and Steel Company participated, financially or otherwise, or conducted or controlled the defense in the suit against Wood and the Hart Company.

Fourth. There is not a shadow of ground presented, either by this Petition or by the records in either of the two suits, for the claim that the Petitioners or either of them had agreed to or would have been bound by the decree in the Ohio suit had that suit been decided in Respondent's favor, or that the Elyria Company had agreed to be bound by the decree in the Hart case.

Fifth. The subject matter of the suits in the two circuits and the relief sought were not the same, although growing out of the same set of circumstances. In one case the recovery sought was for the manufacture of a tie plate and in the other for the sale of the tie plate.

Sixth. The parties not being the same, an injunction against defendants in one case would not reach the defendants in the other case.

Several other matters were urged in the motion and are suggested by the Petition and brief herein, but when analyzed will be found insufficient to constitute any estoppel.

VI.

Petitioners' citations.

Decisions of this court, viz: *Kessler* v. *Eldred*, 206 U. S. 285; *Birdsell* v. *Shaliol*, 112 U. S. 485, and cases of other courts are cited in support of the petitioners' contention. We do not believe these authorities apply.

Birdsell v. *Shaliol, supra,* distinctly sets forth the three fold nature of the patent grant; that suits may be brought, concurrently or not, against the manufacturer, the vendor and the user, and that a judgment against one tort-feasor is no bar to either of the other actions unless such judgment covers and embraces *the entire recovery* to which the patent owner is entitled. Such is not the fact here. No recovery for infringement against the Elyria Company for *manufacturing* the infringing tie plates could have compensated the respondent for the damages to which it would be entitled for the *sale* by the Hart Company. Nor could any judgment against the Hart Company as vendor have compensated the respondent for its damages against the Elyria Company as manufacturer. No judgment against the Santa Fe Railroad Company as *user* could have been entered in either the Sixth or the Seventh Circuit cases. *Birdsell* v. *Shaliol,* clearly, does not apply.

The rule announced in *Kessler* v. *Eldred* was distinctly *limited to the parties and their privies.* The circumstances of that case on one hand and the facts and circumstances of the instant case and the Sixth Circuit case on the other hand, are important to note. The infringement suit by the patent-owner, Eldred, against Kessler in the Seventh Circuit had

been completed, the bill dismissed upon the ground of non-infringement, the decree had been affirmed by the Seventh Circuit Court of Appeals, and no suit by Eldred against one Breitweiser, a user of Kessler's cigar lighters, was co-pending. The suit against Breitweiser in the Second Circuit was not commenced until after the Eldred patent had been sustained against a third party, Kirkland, in a separate and different proceeding.

The case of *Kessler* v. *Eldred* was not one where a prior adjudication on a patent was pleaded in bar or where as here, it was sought to be taken advantage of as *res adjudicata* by one not a party to the record. It was a suit by Kessler to enjoin Eldred from interfering with his business by bringing or prosecuting infringement suits under Eldred's patent. Of the decision in that case, this court said in a later case:

> "It will be observed that the equity thus sustained sprang from the decree in the former suit *between the parties,* and that decision *went no further than to hold it to be a wrongful interference with Kessler's business to sue his customers* from using and selling the lighter which Kessler had made and sold to them and which was the same as that passed upon by the court in the previous suit."
>
> *Rubber Tire Wheel Co.* v. *Goodyear T. & R. Co.,* 222 U. S. 413.

Moreover, in *Kessler* v. *Eldred, this court expressly reserved* its opinion upon the question as to whether Breitweiser, a customer of Eldred, could plead the prior adjudication as a defense in his suit and that question and facts in its support, although raised by **argument, are not now before this**

court by proper pleading and proof. The rule of that decision does not apply to our case.

Upon the other hand, the bill against the Elyria Company in the Sixth Circuit was filed on Dec. 9, 1908, while the suit against the petitioners was commenced in the Seventh Circuit, December 11, 1908. These *suits have been co-pending* throughout the whole course of the proceedings in the suit in which this petition is filed. The records were duplicated. **It was always understood between all of the parties and their counsel that the two cases were separate suits, and THAT EACH WOULD BE TRIED UPON ITS MERITS.** In fact, the suit against the petitioners was the first of the two cases to be tried in the *nisi prius* court. These facts and circumstances alone would constitute a **waiver** of any right to claim *res adjudicata* as a defense.

VII.

Petitioners guilty of laches.

Again, upon the subject of laches, we submit that if there be, as asserted by petitioners, such privity between the petitioners and the Elyria Iron & Steel Company, that a final judgment in one circuit would control the case in the other circuit, it seems to us that *timely action* should have been taken by the petitioners, or by the Elyria Company. Even the Railway Company, if it was a privy in fact, could have applied for leave to intervene in one or the other of the two cases. It seems to us that some ruling or order of court should have been applied for by the defendants in either the Sixth or the Sev-

enth Circuit cases, either before the adducing of proofs and the making of expense, or when the Hart case came on for hearing on the merits before Judge Kohlsaat, June, 1911, or before the Elyria case came before Judge Day, January, 1912, if there existed between the defendants, the privity now urged. On the contrary, as before stated, no privity of interest was asserted or claimed by the petitioners, either for themselves or on behalf of the Santa Fe Railroad Company, or even intimated, until the instant case came before the Court of Appeals for the Seventh Circuit in October, 1914.

"HE WHO SEEKS EQUITY MUST DO EQUITY." The petitioners should have taken earlier action, if their rights or the alleged rights of the Santa Fe Railroad Company were being prejudiced by the fact that two independent suits were concurrently pending. They slept on their alleged rights and by not raising these questions in time, are now met by the maxim, "Equity does not favor a sleepy suitor."

The facts in the case before the Circuit Court of Appeals for the Third Circuit, make the decision in *Jefferson Electric Light, Heat & Power Co.* v. *Westinghouse Elec. Mfg. Co.*, 139 Fed. 385, very pertinent. In that case the court said:

> "Having concealed its connection with the Catskill suit while it was pending, it is too late now for the Diamond Meter Company to set up the final decree in that case as an estoppel against the complainant." (139 Fed. 385, C. C. A. 3d.)

Even if the record showed (as it does not), that the Santa Fe Railway Company had paid all the expenses, and directed and controlled both the Sixth

and Seventh Circuit cases, the Railroad Company, not being a party to either litigation and having carefully *concealed* all connection with both cases, under the rule announced in *Jefferson* v. *Westinghouse, supra,* could not properly maintain the position now sought by the petitioners, namely, that it is a privy and that, therefore, the decision in the Sixth Circuit case is *res adjudicata.*

Clearly, the petitioners can have no greater right in such circumstances than could the Railway Company were it a proper party, when basing their petition upon the acts of the Railway Company.

VIII.

Subject-Matter Different.

Letters patent guarantees to the patentee or grantee an exclusive right to make, an exclusive right to vend and an exclusive right to use the patented invention. Infringement of these three rights creates three separate and distinct causes of action, although each may be based upon the same state of facts or incidents. Where the entire monopoly is invaded by one tort-feasor, the three causes of action are necessarily joined; where the three torts are committed by three separate tort-feasors, in the same or different circuits, independent causes of action exist and the three suits may be brought successively or concurrently. (*Birdsell* v. *Shaliol,* 112 U. S. 485.)

The cause of action in the Sixth Circuit case arose

out of the *manufacture* of the tie plate by the Elyria Iron & Steel Company. The cause of action in the Seventh Circuit arose out of the *sale* of the tie plates by The Hart Steel Company and Guilford S. Wood to the Santa Fe Railway. A third cause of action arose out of the *use* by the Santa Fe Railway of the tie plate purchased from the petitioners, although no such suit has as yet been brought.

Where suits for infringement are brought against the manufacturer, the vendor and the user, a judgment in either suit will not operate as a bar to the prosecution of the other cases, except in two instances—first, where the judgment entered in one suit embraces the entire recovery to which the patentee is entitled, and, secondly, where such privity exists between the defendants in the three suits, as to make the judgment against one cover any judgment that could be rendered against the others. Even in the instance where the judgment embraced the entire possible recovery of the patentee, *the bill will not be dismissed,* but will be maintained in order *that an injunction* may issue against the defendant to restrain future use of the patented invention.

As to the second exception, the rule is laid down by this court in *Cromwell* v. *County of Sac,* 94 U. S. 351.

Manifestly, the right of action arising out of the manufacture of the tie plates by the Elyria Company embracing the right to recover manufacturers' profits, and the patentee's damages, and the right to an injunction against the manufacturer, is not the same cause of action or demand that arises from the sale of those same tie plates by, and the right

to an injunction against The Hart Steel Company and Guilford S. Wood, the petitioners.

Separate suits by holders of an issue of say 100 bonds, may be cited as another instance of different causes of action arising out of the same circumstances, where a judgment in one suit would not be a bar to a subsequent suit by another. Clearly, a judgment against a holder of one bond cannot be a bar to suits brought by the holders of the other 99 bonds.

To create an estoppel, the judgment relied on must be based on the *same claim or demand*, which is alleged in the second action; for if upon a different claim or demand, the judgment in the prior action operates as an estoppel only as to those matters in issue or points controverted, upon the determination of which the finding or verdict was rendered.

This court said:

> "In all cases, therefore, where it is sought to apply the estoppel of a judgment rendered upon one cause of action to matters arising in a suit upon a different cause of action, an inquiry must always be upon the point or question actually litigated and determined in the original action, not what might have been thus litigated and determined; only upon such matters is the judgment conclusive in another action." (*Cromwell* v. *County of Sac, supra.*)

IX.

The Parties Different.

The petitioner, The Hart Steel Company, is a different corporate entity from the Elyria Iron & Steel Company, defendant in the Sixth Circuit

suit. One is a corporation of New York and the other a corporation of Ohio. They are citizens of different states. One is a *manufacturing* corporation, the other a *mercantile* or jobbing corporation. One of the petitioners, Guilford S. Wood, is the active and selling agent of The Hart Steel Company, but, so far as this record shows, he has no connection with the Elyria Company. Nor will the fact that there may have been interlocking directorates or that one W. S. Miller was the president of both corporations, help out the petitioners' assertions.

There is no proof that either of the petitioners stands in the relation of "principal and agent" to the defendant corporation in the Sixth Circuit, or that either petitioner is conducting or is "a branch" of the business of the Elyria Company.

The phrase in the brief in support of the petition, that The Hart Company is "the selling agent or selling department" (Brief, p. 1), of the Elyria Company, is not founded upon facts and is *dehors* the record. It is a conclusion of counsel for petitioners. The witness McKee, not an officer of the Elyria Company but merely an employe, is the only witness who testified upon the subject. He made no such claim as is now advanced in support of the petition. He merely stated that The Hart Company was "the selling organization" of the Elyria Company—not generally and for all its business, but *only as to a part of its business.* McKee did not attempt or pretend by his testimony to establish a general agency with power in the agent to bind the principal. His evidence is that a selling organization existed only "insofar as it affects the material they sell to railroads." (McKee Dep., Q. 6, p. 2106.)

Even had he attempted to establish the relation of principal and agent between the two corporations, such evidence by an employe and not an officer would be clearly incompetent and insufficient. However, McKee's statements are so inconclusive and at best so uncertain that it is impossible for this court to determine from them the real status of the parties, and he is the only witness on this point. Nor does the answer to Q-3, in the deposition of Miller (Rec., 1326), help petitioners in this regard, because the *question* was:

> "Is it a fact, *as stated* in the deposition of the defendants' witness, Willard McKee, etc.?"

Before the doctrine of estoppel, sought by this petitioner, may be enforced, the actual fact of agency must be clearly and definitely established. A mere conclusion of a witness, or of petitioners' counsel, will not be sufficient, according to the rule stated by this court in *Russell* v. *Place,* 94 U. S. 606, where the court stated:

> "According to Coke, an estoppel must 'be certain to every intent;' and if upon the face of the record *anything* is left to conjecture as to what was necessarily involved and decided, there is no estoppel in it when pleaded, and nothing conclusive in it when offered as evidence." (94 U. S. 606.)

We assert, therefore, that the record shows no proof that the relation of principal and agent existed between the Elyria Company, the Sixth Circuit defendant, and the petitioner, The Hart Steel Company. Moreover, there is not even a suggestion, much less any proof, of privity between the Elyria Company and the petitioner, Guilford S. Wood.

X.

Cases on Privity of Parties.

Among the cases cited by counsel for petitioners in support of his proposition, are *David Bradley Manufacturing Company* v. *Eagle Manufacturing Company,* 57 Fed. 980, and *General Electric Company* v. *Morgan-Gardner Electric Company,* 168 Fed. 52.

The decision by Circuit Judge Jenkins, in the Bradley case, is a remarkably clear exposition of the principles and application of the doctrine of *res adjudicata.* In that case, it appears that a suit was brought in the Eighth Circuit by the Eagle Company against a selling agent or "branch house," in Iowa, of the Bradley Company, of Illinois, and that this suit proceeded to an interlocutory decree finding validity of the patent and its infringement. Suit was then brought in the Seventh Circuit for infringement of the same claims of the same patents against the manufacturer, the Bradley Company, and *the original bill set up the interlocutory decree* in the Iowa case. Some proofs were taken in the Illinois case as to the validity of the patent and its infringement.

Thereafter, a *supplemental bill* was filed in the Illinois case setting up that the interlocutory decree in the Iowa case had *been made a final decree,* and the latter was introduced and received in evidence. It was stipulated that the Illinois Company had defended the Iowa suit. Several objections were raised to the Iowa decree as a bar, but all of these objections were overruled.

The following facts clearly appear in that case both by the pleadings and the proofs:

First, that the Iowa defendant was the agent of the Illinois defendant; *Second,* that the same claims of the same patents and the same infringing device were involved in both suits; *Third, that the Illinois Company had assumed, directed and controlled the defense in the Iowa suit; Fourth,* that the decree in the Iowa suit was brought into the Illinois suit by proper pleadings, including a supplemental bill; and, *Fifth,* that that decree was regularly offered and received in evidence in the Illinois case.

Upon this state of facts, the court, of course, found that there was an absolute bar to any controversy as to the validity or infringement of the patents.

At this point, we will contrast the facts of those cases with the facts of these cases: in those cases as well as in the two here involved, the suit was on the same claims of the same patents, the infringing devices were identical, and the defendant in one suit was a manufacturer and in the other suit was the seller. *Here the similarity ends.*

In the Bradley case, there was an admission and proof that the manufacturer had defended the suit against the seller. In this case, there is *no such admission and no such proof.* In the Bradley case, the final decree in the Iowa case was brought forward by supplemental pleading and duly offered in evidence. *In this case, there is no pleading and no proof of such a decree.* In the Bradley case, the court clearly states the necessity for pleadings and due proofs and the same necessity applies to this case.

The Bradley case affords no precedent for this proceeding but, on the contrary, is distinguished from the instant case in the fact that here an essential element of estoppel is wanting. Formal pleadings and proofs are wholly lacking. Therefore, the Bradley case can have no application in support of the petition.

The other decision above referred to, namely, that of the *General Electric Co.* v. *Morgan-Gardner Electric Company, supra*, involved another phase of the situation. A patent had been held valid in a suit by the General Electric Company against the user of the machine made by the Morgan-Gardner Company. By *supplemental bill,* the final decree in the suit against the user was pleaded, coupled with the allegation that the Morgan-Gardner Company was, in fact, the real defendant in the former litigation. The Circuit Court of Appeals for the Seventh Circuit said:

> "While the proofs show that appellee paid an attorney who appeared for the Garrett Coal Company and defended the suit, and that, at the conclusion of the litigation, appellee paid a part or possibly all of the court costs, there is *no proof that the attorney* was not under the *exclusive direction and control of the Garrett Coal Company,* or *that appellee had any standing except as an interested and sympathetic non-participant.*" (168 Fed. 52.)

This disposes of all claim that the action of the Santa Fe Company in merely "retaining" Mr. Reed as counsel, is sufficient to establish such privity between it and any of the parties as to support the contentions of the petitioners.

It seems to us, therefore, that these two cases

clearly point out the metes and bounds of the doctrine of estoppel, and both negatively and affirmatively dispose of the present contention of these petitioners.

XI.

Motion To Affirm Properly Overruled.

One error complained of, (Par. 12 (i.) p. 14, Petition), is that the court denied the petitioners' motion to affirm the Hart case upon the decision in the Elyria case, on the ground of *res adjudicata.*

A. No proper proof as to estoppel.

Petitioners attempted to bring into the closed record certain additional facts by motion supported by affidavit. Even if it be assumed that the facts and circumstances raised a proper defense by estoppel, *such defense* could not be availed of by *motion.* The defense can only be predicated upon facts. Facts cognizable by a court can only be properly presented by a record properly before the court. The defense of *res judicata* goes to the very vitals of a case; it is in effect a plea in bar, which must be raised in the pleadings in some way, and must, in any event, *be definitely and positively supported by adequate proof.*

No such conditions exist in this case. Extraneous documents were brought in, supported by affidavit attached to the motion, [for motion, see Rec., p. 2174, *et seq.*],—documents which in and by themselves, were not sufficient even if they were properly before the court. That they were improperly

before the court is manifest, because not having been subjected to any counter proof by the respondent, they were *exparte* in their nature, as presented to the court. If the Court of Appeals for the Seventh Circuit had taken cognizance thereof, it would have resulted in this respondent not having had its "day in court" thereon, because having had *no opportunity to adduce and offer proofs in reply as to the alleged facts and circumstances.*

> "The defense of estoppel requires a *special plea* to introduce it into a litigation. Thus, for example, if a former judgment or decree is not pleaded as an estoppel by a defendant, *he refers the merits of the controversy anew to the court.* The former adjudication may be used as an *argument,* but it cannot be relied upon *as a bar,* unless it is set up in a special plea."
>
> Walker on Patents, Third Edition, Sec. 470, p. 375.

> "It is true that when the record of a former judgment is set up as establishing some collateral fact involved in a subsequent litigation, it must *be strictly pleaded;* and the rule is that such *pleading must be framed* with the *utmost precision* and cannot be *aided by inference or intendment.*"
>
> *Lynde* v. *Columbus, et al.,* 57 Fed. 993.

> "Where an estoppel is relied upon, *the facts upon* which it is based must *be proved* with *particularity and precision,* and nothing can be supplied *by inference or intendment.*"
>
> *Standard Sanitary Mfg. Co.* v. *Arnot,* 135 Fed. 750-6. (C. C. A. 3rd Circuit.)
>
> 1 Daniels, Chy. Pleading & Proof, page 781.
>
> 1 Am. & Eng. Enc. of Pleadings & Proof, 499.
>
> 1 Ch. on Pl. 509.

Warren Featherbone Co. v. *DeCamp, et al.*, 154 Fed. 200.
Story's Equity Pldg., 10th Ed., Sec. 903.

B. Estoppel not pleaded.

Moreover, in accordance with such understanding, the petitioners and their counsel did *not plead estoppel in either case, and took no steps to suspend either case.* They permitted both cases to proceed to final decree. They permitted the appeal in the instant case to be perfected. They prepared a voluminous brief *on the merits* and filed the same in the Circuit Court of Appeals for the Seventh Circuit *without any* hint or suggestion of any alleged privity between them and the Elyria Company, or that the decision in the Sixth Circuit would abate or control this case. This allegation of *res adjudicata,* therefore, came too late. It should now be disregarded.

Nor would the Santa Fe Railway Company be in any better position, were it a party. It stood on the side-lines, speculating on the decisions of the courts,—as it did with respondent's tie plates—taking advantage where it could, and skulking behind the actual defendants when and so long as it could, and as it is doing to this day and in this very petition. If estoppels are odious, to be rigidly scrutinized and only sparingly allowed, then this petition, seeking as it does to enforce an estoppel, should be denied.

The appeal stood for hearing in the Circuit Court of Appeals for the Seventh Circuit upon errors assigned to the decree entered by the Circuit Court. The question presented by the motion *was not raised*

as error or by any pleading. If it be a fact that privity exists, sufficient to base the defense of *res adjudicata* upon, that defense should have been first set forth in supplemental pleadings, filed in accordance with an application under Equity Rule 19; proofs should have been introduced to substantiate such defense, this respondent should have had the opportunity of answering such proofs, and the Court given the opportunity of making a finding upon such proofs.

Brill v. *Peckham Motor Truck & Wheel Company,* 189 U. S. 57, was a suit by Brill and J. G. Brill Company against the Peckham Company for infringement of patent, previously sustained by Judge Shipman and in which preliminary injunction on affidavits was ordered by Judge Lacombe. At the hearing, affidavits setting up prior patents were filed by the defendants but complainants had apparently no opportunity to inspect them before argument. Judge Lacombe held that there was no prior patent before him which had not been before Judge Shipman in the prior adjudication and granted said preliminary injunction. The Circuit Court of Appeals reversed the order granting an injunction with instructions to dismiss the bill with costs. A petition was filed for rehearing and denied, and then writ of certiorari was granted. This court, after commenting on the facts in *Mast F. & Company* v. *Stover Mfg. Co.,* 177 U. S. 485, said:

> "It should be observed that in that case, complainant was served with defendant's affidavits before the argument below and was permitted to put in rebuttal affidavits. The merits of the case were fully before the court, etc."

And, then, in contrasting the facts of the Brill case before it with the facts in the Mast Foos case, showed that the complainant had no opportunity to cross-examine defendant's *ex parte* witnesses and to show the facts with respect to the matters set up in the *ex parte* affidavits filed at the hearing; and stated this court

> "was impressed with the conviction that complainants have not had their day in court and that it ought to have been accorded them."

This court reversed the decree of the Court of Appeals and remanded the cause to the Circuit Court with directions to proceed to a final hearing in due course.

The case of *J. A. Brill et al.* v. *Washington R. & E. Company,* 215 U. S. 527, cited in petitioners' brief, was one for infringement of a patent by Brill. It was defended by the Peckham Manufacturing Company, successor to the Peckham Motor Truck & Wheel Company. The principal claim relied on had been declared void in *North Jersey Street R. Company* v. *Brill,* 67 C. C. A. 380, which suit was said to have been defended by the Peckham Company. It was claimed that the Peckham Motor T. & W. Company was privy to the decree declaring the patent void and that therefore its successor, Peckham Manufacturing Company, defending the instant suit, was likewise privy to said decree and could plead that decree in bar, under the doctrine of *Kessler* v. *Eldred.* It does not appear from the report how this question was raised, but it does appear from the decision of this court that the pleadings and proofs were necessary. For

after admitting that there might be force to such a contention if the first Peckham Company was in fact a privy to the decree, this court said:

> "It is unnecessary to decide that question, because *the formal proofs are wanting.*" (215 U. S. 527.)

The defense of *res adjudicata,* having been improperly raised and not having been supported by proper proofs, was, therefore, properly denied. The petition for *writ of certiorari* may very properly be denied for the same reason.

XII.

Mere Contribution to a Defense Is Inconclusive of Privity.

Mere contributions to the expenses of litigation cannot, *per se,* established privity of interest, such as is herein asserted by the petitioners.

In *Rumford Chemical Works* v. *Hygienic Chemical Company,* 154 Fed. 65, there was an appeal from a decree dismissing the bill filed by the Rumford Company, on the ground of non-infringement, and the Court of Appeals for the Second Circuit found that there was no error in the decree if the testimony of one Clotworthy was rightfuly excluded. The excluded deposition was taken in a suit by the Rumford Company against the New York Baking Powder Company. It was alleged that the defendant in the Third Circuit aided in and contributed to the defense of the New York suit. The Court of Appeals said:

> "While the Hygienic Chemical Company of New York did contribute to the defense (of the

> New York suit), and one Heller, who was president of both companies, was a witness in that case, there is no sufficient proof to connect the present respondent with the defense of that case."

The court below [148 Fed. 862], gave a more complete statement of facts, as follows:

> "There is no evidence of any agreement between the defendant herein and the defendants in the New York litigation (which established complainant's patent) as to a joint defense of the suit; nor does it appear that this defendant, or, indeed, the New York corporation, *had the right to control the proceedings,* assume any active right therein, cross-examine the witnesses, or appeal from the judgment. *I have found no case which goes to the length of saying that one who merely contributes to the defense of a suit, is bound as a privy by the result thereof.* Such a contribution might well be made from charitable or other good and sufficient reasons."

As said by HAWLEY, J., in *Theller* v. *Hershey* (C. C.), 89 Fed. 575:

> 'The law is well settled that parties and privies include all who are directly interested in the subject-matter, and who have the right to make defense, control the proceedings, examine and cross-examine witnesses, and appeal from the judgment.'" See, also,
>
> 1 Greenleaf on Evidence, Sec. 523;
>
> *Hanks Dental Assn.* v. *International Tooth Crown Co.*, 122 Fed. 75;
>
> *Australian Knitting Co.* v. *Gormly*, 138 Fed. 92;
>
> *Penfield* v. *C. & A. Potts & Co.*, 126 Fed. 475;
>
> *Singer Mfg. Co.* v. *Crammer*, 109 Fed. 652.

It is clear, therefore, that in the case at bar, there is lacking every essential fact upon which privity must be shown. There is non-identity of parties defendant; there is non-identity of causes of action. There is no privity of contract between the defendants in the two suits or in the direction and control of the defense of either suit. The suggestion of privity because of the alleged defense of both suits by the Santa Fe Railway Company cannot stand in the absence of proof of such defense. As before pointed out, the railway company is not a party. It has studiously avoided becoming a party.

The suggestion that, if this petition be denied, the result will be to continue respondent's patent monopoly until the expiration of its patents, we submit, has not heretofore been accepted as a proper basis for the granting of a *writ of certiorari*. Such a result may be a hardship upon infringers, past and future, but it will be only what any tort-feasor must expect. Moreover, we again respectfully submit that the correct statement of the law of these cases is found in the decision of the Circuit Court of Appeals for the Seventh Circuit. If the petition herein be denied, that decision will stand as the law of the land upon the issues involved, and there will be no further uncertainty. **These Wolhaupter patents were not infringed for 14 years** and will not be again infringed, if this petition is denied.

XIII.

Recapitulation.

We respectfully suggest that the petition for *writ of certiorari* may properly be denied:

First, on the ground that the Circuit Court of Appeals for the Seventh Circuit has had no opportunity of correcting the alleged errors;

Second, upon the ground that on the matters of law upon which the two Circuit Courts of Appeal have differed in their decisions, the decision of the Seventh Circuit Court, being correct, should be allowed to stand;

Third, because the defense of *res adjudicata,* if proper, was not raised by any proper pleading and is not supported by any proper evidence;

Fourth, that the circumstances of these cases and the conduct of the parties has been such that the petitioners waived whatever rights they may have had, and by going to the second trial, they referred all questions decided by the first case for trial *de novo* at the second trial. They should now be estopped from raising the question of *res adjudicata* on the ground of laches;

Fifth, on the ground that the decree in the Sixth Circuit is not *res adjudicata* because, as to the parties, there is no privity of interest shown by the proofs and, as to causes of action, the subject-matter and the relief sought is different in the two cases;

Sixth, because the Atchison, Topeka & Santa Fe

Railway Company is not shown by the record to have directed and controlled either litigation, but is merely in the position of an interested outsider, who for its own reasons has merely contributed toward the expense thereof, the amount of the "retainer" fee of the petitioner's counsel, Mr. Reed; and

Seventh, because even if the said Railway Company be in fact in privity by contract or otherwise with one of the petitioners, that fact is not shown by this record, and the Railway Company is not a party; and even if shown it would be immaterial and will not avail the petitioner because the decree in the Sixth Circuit case is not *res adjudicata* as to said petitioner.

The petition for a *writ of certiorari* should be denied.

Respectfully submitted,

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MARCH 8, 1915.

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IN THE

Supreme Court of the United States

OCTOBER TERM, A. D. 1916.

No. 67

THE HART STEEL COMPANY AND GUILFORD S. WOOD,
Defendant-Petitioners,

vs.

THE RAILROAD SUPPLY COMPANY,
Plaintiff-Respondent.

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SEVENTH CIRCUIT.

REPLY BRIEF FOR PETITIONERS.

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IN THE

Supreme Court of the United States

OCTOBER TERM, A. D. 1916.

No. 67

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Defendant-Petitioners,

vs.

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ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SEVENTH CIRCUIT.

REPLY BRIEF FOR PETITIONERS.

II.

STATEMENT OF THE FACTS.

(Brief, 3-9.)

References to the brief of counsel for the Railroad Supply Co., respondent in No. 67 and petitioner in No. 95, are made under the style of (Br., 1-2) and to the briefs for the Hart Steel Co. and Guilford S. Wood, petitioners in No. 67, and the Elyria Iron & Steel Co., respondent in No. 95, under the styles of (Original Brief) and (Supplementary Brief). The Railroad Supply Company, respondent in No. 67 and petitioner in No. 95

is herein referred to as "The Supply Co." or "complainant"; the Hart Steel Company and Guilford S. Wood, petitioner in No. 67 as "defendants" and the Elyria Iron and Steel Co., respondent in No. 95 as "defendant" or "The Elyria Co."

An accurate statement of the facts in this litigation appears in the brief for petitioners. (Original Brief, 1-8. It is not proposed to iterate these statements, or to go into unimportant detail, but it is desirable to direct attention to some significant omissions and many unfounded assertions in law and fact in the opposing brief.

It must be noted that there is no claim in the Supply Co.'s statement of facts that The Railroad Supply Company ever manufactured or marketed any one of the specific devices shown and described in the three Wolhaupter letters patent and declared to be his inventions. The only Wolhaupter plates embodying the drawings and descriptions of his three letters patent were the aluminum models made and in evidence for defendants. The plates made by The Supply Company prior to 1904 were variant from the forms shown in the letters patent and progressively and increasingly different. (Rec., Vol. 2, pp. 900-942.) A flat, side shoulder and top channeled plate was never made by The Railroad Supply Company until 1904, after the engineers of the Atchison, Topeka & Santa Fe Railway Company as well as the engineers of the Harriman Lines had devised this form. It is styled by The Supply Company either "flat bottom corrugated top shoulder tie plate" (Rec., Vol. II, p. 919; Vol. I, p. 41) or "The Harriman plate." (Rec., Vol. I, p. 90.) That it was never made by The Railroad Supply Company prior to 1904 is conceded by its President, Hawley. (Rec., Vol. I, 46.) The plates made by The Railroad Supply Com-

pany for the Santa Fe Road prior to 1904, styled "Wolhaupter plates," were of different construction. (Rec., Vol. I, 243; Vol. I, 83.) The Harriman style of tie plate was not originated by Wolhaupter or The Railroad Supply Company, but by railroad engineers. (Original Brief, pp. 81-83, where the history is set out in full, showing origin in 1904 independently of this style of plate by the engineers on the Southern Pacific or Harriman Lines and of the Santa Fe Railway.)

It may be true that nearly all of the thirteen hundred railroads of this country have purchased and used or are now so using the Wolhaupter patented tie plate, if any plate with a channeled top is considered a Wolhaupter tie plate, but no railroad company ever purchased or used plates made as shown and described in any Wolhaupter patents, nor did Wolhaupter originate either the Harriman or the alleged infringing plate. (Rec., Vol. I, 452, 453; Rec., Vol. II, 557; Rec., Vol. II, 576, 577; Rec., Vol. I, 202, 203, 208, 209, 232-239; Rec., Vol. I, 315, 316, 322; Rec., Vol. I, 222, 225; Rec., Vol. I, 326, 327, 330, 332.)

The statistics as to sales of Wolhaupter "corrugated top tie plates" are entirely misleading for therein all plates with channeled tops are included as "Wolhaupter" plates. (Rec., Vol. II, 873.) Nor, if the Harriman plate be an infringement of any of the Wolhaupter letters patent, is it true that there was no infringement by its use, for, after this type had been devised by the Santa Fe engineers, it was in 1906 adopted by the Santa Fe as standard and for some time manufactured for it by the Independent Railroad Supply Company. (Rec., Vol. I, p. 280.) Nor is it true, as asserted (Brief, p. 8), that all plates on the market prior to 1895 were flat top plates. The Goldie plate had been manufactured, mar-

keted and used extensively in 1892 and 1893, and was a plate with side rail supporting bearings, side rail shoulder, concavity underneath the rail base and lower tie engaging projections. (Defendant's Exhibits "B" and "C," aluminum model Exhibit "O-10"; Rec., Vol. I p. 358; Vol. I, pp. 248, 260, 434; Vol. II, pp. 803, 819.)

Whatever the fact is about so-called Wolhaupter tie plates having been used on railroads, it is clear that they were not satisfactory, have not been used at all by many large railroad systems, in other instances have been found inadequate and on others abandoned for other styles after use. The Santa Fe found Wolhaupter plates unsatisfactory. (Rec., Vol. I, pp. 207-208, 232-239, 252, 263, 268, 312.) They were not satisfactory on the Harriman Lines and were replaced by the Sacramento flat top plate and then by the Harriman style plate was devised by Isaacs and Wallace. (Rec., Vol. I, pp. 448-453; Rec., Vol. II, pp. 570, 571, 572.) The Chicago, Milwaukee & St. Paul does not use any, either actual or so-called, Wolhaupter plates. (Rec., Vol. I, p. 469.) The Illinois Central used a number of forms, including Wolhaupter, but abandoned the latter because the flanges were destructive to the tie. (Rec., Vol. I, p. 481.) The Chicago, Burlington & Quincy from 1891 to 1909 has used almost every variety of tie plate, including a very few Wolhaupters. (Rec., Vol. I, pp. 483-485.) Since 1906 the standard on the Rock Island System has been a malleable iron tie plate distinct from any form of Wolhaupter and it has been supplied in part by The Railroad Supply Company. (Rec., Vol. I, p. 498.) The Chicago & Alton, after using a few Wolhaupter, Glendon flange and Servis tie plates, practically abandoned all three because the flanges were too deep and destroyed the tie. The Sellers tie plate has been standard for three years. (Rec., Vol. I, p. 500.)

In 1909 a few old Wolhaupter (Ex. 24, Rec., Vol. I, p. 83) and a number of Harriman, Q. & W. and Servis used. (Rec., Vol. II, p. 879.) The Chicago & North Western Railroad Company, beginning in 1899, used Glendon, Goldie, Wolhaupter and Sellers tie plates, but has finally settled on the Sellers tie plate. (Rec., Vol. I, pp. 502-504.) The Pennsylvania System has never used a Wolhaupter tie plate. (Rec., Vol. I, 204, 233, 505.) The Philadelphia & Reading Railroad uses tie plates entirely different from the Wolhaupter. (Rec., Vol. I, p. 506.) In 1901 or 1902 the Monon used some Wolhaupter plates, then changed to the Goldie, and the Goldie and Sellers plates are now standard. It was found the Wolhaupter tie plates did not hold the rails. (Rec., Vol. I, pp. 507-511.) The Chesapeake & Ohio Railroad System does not use real Wolhaupter plates. (Rec., Vol. I, p. 516.) Nor does the Chicago & Eastern Illinois. (Rec., Vol. I, p. 515.) The Northern Pacific Company does not use Wolhaupter, but a variant form of tie plate. (Rec., Vol. I, p. 506.)

III.

Errors.

Point I (Brief, p. 10) asserting *prima facie* validity of the patents, burden of proof on defendants, and failure of prior art to anticipate or limit their scope, and the success of the Wolhaupter devices, cannot be sustained either in fact or law. Under the rule the prior letters patent showed devices new, useful and patentable, and gave the patentee the right for all uses. Neither the public nor the plaintiff itself has recognized the Wolhaupter devices shown in the patents as successful or desirable.

Point II (Brief, p. 10) calmly asserts the entire case

for the complainant, ignoring all defendants' proofs, declaring no limitations in the construction can be taken into consideration in considering the Wolhaupter patents and asserting infringement as certain.

A fundamental error permeating the entire brief is the calm assumption that what is law for the plaintiff is not law for the defendants, that all prior tie plates and similar devices shown in prior letters patent and publications were impracticable and devoid of utility, whereas the legal presumption of utility, arising from a grant of letters patent, applies to all patents, both those shown in anticipation and those which are the subject of the suit. The second fallacy in the brief limits every prior device described or shown to the precise construction evidenced in order to differentiate the alleged Wolhaupter inventions and give them elements of novelty and patentability, while in the construction of the Wolhaupter patents and the question of infringement, an exactly opposite method is pursued. All tie plates not only with corrugated but with channeled or recessed devices are styled "Wolhaupter." The theory of course seems to be nothing anticipates unless it is identical, but everything infringes that can possibly be within the language of the Wolhaupter claims when construed in the most liberal manner. Whether or not this latter rule would apply in the case of a pioneer patent does not concern us. It certainly does not obtain where the conceded prior art is extensive and exhibits a multitude of variant forms of broad or basic elements combined and practically exact embodiments of the forms alleged to infringe. (*Gordon* v. *Warder*, 150 U. S., 47, 54.)

The motto of the defendants in this case is extremely simple and entirely logical. It insists upon the same rule of construction in regard to prior patents as the patent in suit, and the same construction of the patents in suit

as applied to prior patents. This results in the logical conclusion and rule so firmly established that whatever infringes if subsequent, anticipates if prior. (*Peters* v. *Active Mfg. Co.*, 129 U. S., 530, 537; *Thatcher Heating Co.* v. *Burtis*, 121 U. S., 286, 294; Original Br., 81.) Counsel insist upon the narrowest rule of construction as to prior devices and the broadest rule of construction and inclusion as to subsequent devices.

IV.

Brief of the Law.
(Br., 11-23.)

I. *Patents as prima facie evidence.*

This rule is not as broad as asserted, as will appear by an examination of the cases cited. It is limited to the presumption that the patentee is the first inventor of what is discovered and secured in his invention. (*Seymour* v. *Osborne*, 11 Wall., 516.) Proof of prior knowledge and use of a complete operative device is sufficient to overcome such presumption and prior use by a single person is sufficient. The number using is immaterial. (*Bedford* v. *Hunt*, 1 Mason, 302; *Coffin* v. *Ogden*, 18 Wall., 120.) Moreover, the presumption obtains only for *the actual invention* and if the claims are too broad the patent is void (*Mitchell* v. *Tilghman*, 19 Wall., 287), and broad claims, in view of the state of the art must be either held void or limited to the specific device shown. (*Dashiell* v. *Grosvenor*, 162 U. S., 425.) It must be also noted that this rule applies to prior patents as well as to patents in suit.

II. (a) *Burden of proof.* (Br., 12.)

While the burden of proof is upon the person claiming lack of novelty and invention, it may be discharged by oral proof of prior use (*Roemer* v. *Simon*, 95 U. S., 214; *Seymour* v. *Osborne*, 11 Wall., 516), and the pre-

sumption obtains only for the *actual invention*, and thi
must be determined by a construction of the patent un
der its specifications and the state of the prior ar
(*Dashiell* v. *Grosvenor*, 162 U. S., 425.)

(b) *Reasonable doubt rule.* (Br., 12.)

The rule that anticipation and prior use must b
proven "beyond a reasonable doubt" applies to oral te
timony of the prior use of alleged anticipating device
and not to devices set out prior letters paten
(The Barbed Wire Patent, 143 U. S., 275, 284; *Mast C*
v. *Dempster Co.*, 82 Fed., 327, 332; *Buser* v. *Novelty Co*
151 Fed., 478, 482.) An examination of the cases cite
will show this limitation. No presumption obtains as t
infringement, except against a licensee. The claims ar
always construed on the basis of the prior art and th
question is "what was the invention?" The proof be
yond reasonable doubt rule does not prevail in the cas
of the introduction of prior patents and publications b
cause the mere introduction of patents raises the pr
sumptions resultant from all patents, establishes th
existence of the patents beyond any doubt, shows be
yond controversy the devices therein described, and e
tablishes conclusive knowledge thereof for the subs
quent patentee. (Original Br., p. 35, *Apple* v. *Americ*
Shoe Machinery & Tool Co., 232 Fed., 603, 605; *Keene*
New Idea Spreader Co., 231 Fed., 701, 710-71
Brown Portable Elevator Co. v. *Interior Warehou*
Co., 234 Fed., 649, 652.) And such prior patents wit
out proof of use are sufficient evidence as to the devic
therein described. (*Model Bottling Mach. Co.* v. *Anheuse*
Busch Assn., 190 Fed., 573; *Westinghouse Air Brake C*
v. *Christensen Engineering Co.*, 128 Fed., 437; *Nation*
Co. v. *Swift*, 104 Fed., 87; *Van Epps* v. *United Box C*
143 Fed., 869; *Sirocco Engineering Co.* v. *Sturtevant C*
220 Fed., 137.)

All presumptions as to matters of fact capable of ocular or tangible proof are in their nature disputable and may always be rebutted and overthrown and are never allowed against ascertained and established facts. When these facts appear the presumptions disappear from the case. (*Lincoln* v. *French*, 105 U. S., 614, 617; *Henderson* v. *Coal & Coke Co.*, 140 U. S., 25, 27.) Even in criminal cases. (*Allen* v. *U. S.*, 164 U. S., 492, 500.) When an anticipating prior device is shown the burden shifts to the subsequent patentee to show that his invention preceded it. *Clark Thread Co.* v. *Linen Co.*, 140 U. S., 481, 492. For practical application of the rule of evidence overturning the presumptions attaching to letters patent see *Palmer* v. *Corning*, 156 U. S., 342, 346. The patent presumptions are met and often overcome by judicial knowledge. *Brown* v. *Piper*, 91 U. S., 37, 42; *King* v. *Callun*, 109 U. S., 99, 102; *Richards* v. *Chase Elevator Co.*, 158 U. S., 299, 301, 159 U. S., 477, 486.

III. (a) *Broad construction.* (Br., 12-13.)

The rule as stated is not sustained by the citations. The true rule is that letters patent are to be construed just like any other contract, fairly and in accordance with their real meaning, and are always to be limited to *the actual invention*, taking into consideration the state of the prior art, the specifications and the nature of the device. (Original Br., 84-85; *Wollensak* v. *Reiher*, 115 U. S., 87; *Pittsburg Meter Co.* v. *Pittsburg Supply Co.*, 109 Fed., 644, 652; *Delamar* v. *Delamar Mining Co.*, 117 Fed., 240; *Yale Lock Co.* v. *Sargent*, 117 U. S., 537, 544; *Snow* v. *Lake Shore Ry. Co.*, 121 U. S., 617, 629; *Wollensak* v. *Sargent*, 151 U. S., 221. But in construing a narrow improvement patent, strict interpretation is given. *Keystone Bridge Co.* v. *Phoenix Iron Co.*, 95 U. S., 274, 278; *Manf. Co.* v. *Sargent*, 117 U. S., 373; *Fay* v. *Cordesman*,

109 U. S., 408; *Dryfoos* v. *Wiese,* 124 U. S., 32; *Burns* v. *Meyer,* 100 U. S., 671; *Huber* v. *Manfg. Co.,* 148 U. S., 270, 291; and *Brown* v. *Manfg. Co.,* 57 Fed., 731, 739. The first problem is to find the actual invention and if any invention is discovered its scope will be construed fairly both to the patentee and the public. In every case cited, the rule is limited to the *actual invention shown.* Many of the cited cases do not apply. The rule plainly does not mean that the court will construe the question of invention in favor of a patentee but that when once invention is found and defined it will construe that invention with fairness both to the patentee and the public. (*Barbed Wire Patent,* 143 U. S., 275.) If satisfied from the showing of the prior art and specifications that the claims should be limited to the specific device shown, this will be done. (*Weir* v. *Morden,* 125 U. S., 98, 107; *Railroad Co.* v. *Kearney,* 158 U. S., 461, 469; *Crawford* v. *Heysinger,* 123 U. S., 589, 606.) The rule of liberal construction, when applied at all is applied in cases of primary and pioneer patents and not to mere improvement patents. (*Railroad Co.* v. *Mellon,* 104 U. S., 112, 118; *Computing Scale Co.* v. *Automatic Scale Co.,* 204 U. S., 609, 621; *Cimiotti Unhairing Co.* v. *American Fur Refining Co.,* 198 U. S., 399, 406.)

(b) *Artificial and technical rules.* (Br., 14.)

It is not sought by us in this case to have artificial or technical rules of interpretation applied to the Wolhaupter patents but to have them construed fairly for both the public and the patentee in view of the state of the art and specifications. Many of the cases cited show this rule. *McClain* v. *Ortmayer,* 141 U. S., 419, says that the claim is a measure of the right of the patentee to relief and while specifications may be referred to to limit the claim, they can never be made avail-

able to expand it, citing *Keystone Bridge Co.* v. *Phoenix Iron Co.*, 95 U. S., 274, 278, and other decisions. It is only in case of doubt that any liberality is indulged in favor of the patentee. *Vance* v. *Campbell*, 1 Black., 427, certainly does not sustain the contention for it held that utility alone was not sufficient to sustain a patent, that extensive sales were an unsafe criterion both of utility and of patentable novelty and that the patent was void for want of invention. In some cases cited as *Potts* v. *Creager*, 155 U. S., 597, the principal question was that of the patentability of a new use and the proof that the device of the patentee had gone into general use and displaced other devices turned the scale in favor of the invention. There was no question of construction on the question of infringement because defendant's machine was substantially the same as plaintiff's. The true rule as to liberality of construction is set out in *Westinghouse* v. *Boyden Co.*, 170 U. S., 537, where it was said:

> "To what liberality of construction these claims are entitled depends to a certain extent upon the character of the invention and whether it is what is termed in ordinary parlance a 'pioneer.'"

And this should be applied to both prior and Walhaupter patents.

IV. *Narrowing by importing dispensable elements.* (Br., 14.)

The cases cited are just as applicable to the prior art as anticipating Wolhaupter, as to Wolhaupter patents, and show that the law requires only a fair construction. For instance in *Rubber Co.* v. *Goodyear*, 9 Wall., 788, it was said (p. 795):

> "A patent should be construed in a liberal spirit to sustain the just claims of the inventor. This principle is not to be carried so far as to exclude what is in it or interpolate anything which it does not contain.

> But liberality rather than strictness should prevail where the fate of the patent is involved and the question to be decided is whether the inventor should hold the fruits of his genius and labors."

This rule has nothing to do with the question of actual invention or what was invented, but simply to the construction of the patent after invention has been found and defined. In *McCarty* v. *L. V. Co.*, 160 U. S., 110, the patentee was restricted to the exact combination claimed. *Lamson Cash Reg. Co.* v. *Keplinger*, 45 Fed., 245, does not sustain the rule as stated. It was a combination patent for improvements in store service apparatus, and it was argued that an additional element not set out in the claim should be added thereto. It was ruled that this was not the proper construction and that a decree should be resolved in favor of the patentee under the principle that a patent will not receive a construction which will render it invalid when it was susceptible of a different one consistent with its validity. This is a familiar rule in the construction of all contracts. The true rule of construction is also set out in *Century Electric Co.* v. *Westinghouse Co.*, 191 Fed., 350, 354; *Morse Chain Co.* v. *Link Belt Co.*, 189 Fed., 584, 588.

V. *Differentiation of claims.* (Br., 15.)

This rule might be conceded without affecting defendants' case, but if the rule exists, it is certainly limited by the consideration of the entire prior art and the specifications and especially the admissions or statements of the patentee therein. The real issues are whether any Wolhaupter claim is valid and then to what extent. Certainly the cases cited to this proposition cannot be very satisfactory for the complainant. *Leeds & Catlin* v. *Victor Talking Machine Co.*, 213 U. S., 301, exemplifies the theory that the fair and proper rule of construction is

to protect a patentee only in what he has fairly shown, described and properly claimed as his invention. *Boyd* v. *Janesville Tool Co.*, 158 U. S., 260, rules that under the previous condition of the art the patent, which was for improvement in hay elevators and carriers, was restricted to the exact and specific devices claimed as novel, and that there was no infringement. And the other cases cited result in the rule that after deciding what the invention really is under the state of the art and the specifications, there may be distinct inventions evidenced by different claims in the same letters patent. In *20th Century H. & V. Co.* v. *Taplin R. C. Co.*, 181 Fed., 96, after an examination of prior patents the claim was rigidly construed and held not infringed.

VI. (a) *Inventive discovery.* (Br., 15.)

There is no quarrel with this rule or the accuracy with which it is reproduced from the cases cited. All that is asked is that it be applied to prior patents and devices.

(b) *Combinations.*

The combination theory advanced and the cases cited will not be criticized or analyzed. The rule invoked is not applicable because Wolhaupter did not first conceive either feature of upper rail-abutting shoulder, upper grooved and flanged rail-supporting surface or lower tie-engaging projections in a tie plate or analogous devices, and it is clearly shown that these differeat elements do not co-operate or co-ordinate in combination either two and two or all three to produce any new and useful result.

Therefore, there was patentable invention neither in fact nor in theory in the Wolhaupter devices. (Original Br., 26-31; Supplementary Br., 30-34; *Apple* v. *American Shoe Machinery & Tool Co.*, 232 Fed.,

603, 606; *E. E. Johnson Co.* v. *Grinnell Washing Mach. Co.*, 231 Fed., 988; *Keene* v. *New Idea Spreader Co.*, 231 Fed., 701, 710; *Ft. Pitt Supply Co.* v. *Ireland & Matthews Co.*, 232 Fed., 871, 874; *Zimmerman* v. *Advance Machinery Co.*, 232 Fed., 866, 870. It is submitted under the facts and authorities that the Wolhaupter claims, especially under the construction insisted on, evidence neither the discovery of any new combination of elements, any new patentable combination of elements or any new and beneficial results, and that they were simply unpatentable aggregations of old and well-known features of tie-plates. (Original Br., pp. 26-31.)

VII. *Invention.* (Br., 16.)

This labored attempt to lay down a rule that will make Wolhaupter an inventor fails because unsubstantiated by the facts, disproved by the showing of the prior art, unsupported by the authorities cited and completely overturned by the decisions of this court and the House of Lords and various other cases. At best, his idea was only channelling the upper rail-bearing surface of the tie plate so as to produce grooves and rail-bearing flanges or supports. This is not invention. (Original Br., pp. 23-26.) (*Phillips* v. *Detroit*, 111 U. S., 604, 608.)

VIII. (a) *Simplicity.* (Br., 16.)

It is conceded that simplicity may be invention. That cannot be the case here because the prior art showed the three tie-plate features now claimed in combination or partial combination by Wolhaupter clearly described in prior patents, and in prior publications and in actual use. The three features of rail-abutting shoulders, flanged upper surfaces and lower tie-engaging projections existed in tie plates and analogous devices both separately, in conjunction two and two, and entirely. (Original Br., pp. 36-53, 53-57, 58-59 and 59-66 and 66-68.)

The union in simple forms appeared before Wolhaupter employed them in complex and impracticable forms, and it is now claimed, that the *simplicity* of the Wolhaupter alleged inventions entitled them to patentability. This cannot be true. The simple practical forms existed before the complicated alleged improvements of Wolhaupter were made. Now, it is sought to have the improvements cover the basis or foundation. Patentable evolution does not proceed in this way. The cases cited, moreover, in finding invention, limited it as an improvement to the exact form employed so that in many cases infringement was not denied, or if established was due to a duplication of the device.

(b) *Degree of invention.* (Br., 17.)

It may be that if there is *any invention* that is real invention the law will not attempt to measure its extent or degree, but this rule applies to it as *an invention* and does not apply when the question of whether there is invention, but when the question infringement, arises. In infringement, the question is of the extent or degree of the invention. The cases cited to this proposition are all cases at circuit. *Washburn & Moen Co.* v. *Haish,* 4 Fed., 900, concerned the Barbed Wire Patents, which afterwards came before the Supreme Court (*Barbed Wire Patent,* 143 U. S., 275.) There the old devices, while held not to anticipate, were held to narrow the field for the exercise of the inventive faculty and limit the range of the patents. Also that mechanical adaptation of old things to new uses was not usually invention except in combinations. *Many* v. *Sizer,* 1 Fish. Pat. Cas., 31; F. C. No. 9057. This was a motion for preliminary injunction. The patent had been sustained by verdict. Defendants had increased the utility of the article by manufacturing a new form. Injunction was refused.

IX. *Large sales and extensive use.* (Br., 17.)

This question has been and is subsequently discussed and need not be here elaborately considered. (Original Br., pp. 72-79; Supplementary Br., pp. 68-73.) (*Infra,* 34-39.) It may be, with propriety, remarked, however, that no Wolhaupter device was ever made in the form shown by his letters patent, that the divergent commercial forms had only a moderate success, are not used on many important roads, and have been, after trial, rejected by others. The caution with which the rule of public use is applied is also shown in the following cases:

Fernald v. *Oneida National Chuck Co.,* 167 Fed., 559; 174 Fed., 1020.

Star Hame Co. v. *U. S. Hame Co.,* 227 Fed., 876, 883.

Rauch & Lang Carriage Co. v. *Hanlon,* 233 Fed., 673, 675, 676.

Johnson v. *Lambert,* 234 Fed., 886, 889.

Indeed, the cases cited announce the rule so cautiously and are influenced by it so infrequently that they need no further discussion or analysis. In all of the cases cited the device which had commercial success was the exact device described in the letters patent and in some of the cases, as in *Hollister* v. *Benedict,* 113 U. S., 59, 72, and *National Hat Co.* v. *Hedden,* 148 U. S., 482, 490, the patent was held void for lack of novelty and patentable invention in spite of commercial success. The question of commercial success is material only in cases of doubtful patent validity and swift and universal success. (Original Br., 78.)

X. *Estoppel of infringer.* (Br., 19.)

No doubt, an infringer is estopped to deny the utility of an invention. But in this case one important question is "whether defendants' tie plate infringes any Wolhaupter letters patent?" Infringement is not presumed but must be proved by plaintiff. The cases cited are cases where a former licensee employed the exact device, or infringement was conceded or apparent by a new use of the exact device.

XI. (a) *New elements in combination.* (Br., 19.)

The cases cited show the limitation of the rule and use as applied in the present case and under these decisions the Wolhaupter patent must be found invalid. It has already been discussed. (Original Br., pp. 26-31; Supplementary Br., pp. 31-34.) As Wolhaupter was neither the originator of the elements or combinations, as the elements in the so-called combination do not cooperate or jointly produce any result (Original Br., pp. 27, 28; *infra*, 28, 80), as no new result is proved and as all that Wolhaupter even claims to have done is to channel the rail-bearing surface of the plate, which is not invention (Original Br., 21-26; Supplementary Br., 27-30), further discussion of the subject is not needed.

(b) *Selecting elements of combination.* (Br., 20.)

The rule that different elements of a combination must not be taken from different prior patents, descriptions or devices has no application, and the authorities need not be discussed. By failing to claim either rail-abutting side shoulder, upper channeled or corrugated rail-bearing surface and lower tie-engaging projections severally as features of a tie plate in all of his letters patent, and by failing to claim the upper side shoulder

in combination either with the flanged surface or lower tie-engaging projections in Wolhaupter patents prior to the last two, Wolhaupter concedes each element and the combinations thereof just referred to as old. (Original Br., 26.)

(c) *Building up.* (Br., 21.)

The rule as to building up a structure with a patent before a person is just as applicable to Wolhaupter and his knowledge of the prior art as conclusively presumed against him as to the defendants.

(d) *Approaching inventive idea.* (Br., 21.)

It is conceded that if the prior device so clearly discloses the idea of the patentee that it would be apparent to a mechanic of ordinary intelligence, then it is anticipation. Attention is also called to the fact that there is a distinction between anticipation and patentable novelty. It is submitted that the prior devices shown in letters patent, described in publications, and actually in use were more analogous to the Wolhaupter patented devices as the defendants' tie plate is to any of them, and that such prior devices were substantially identical with defendants' tie plates. Any Wolhaupter departure from prior devices involved only mechanical skill.

Penn. R. R. Co. v. *Locomotive Engine Safety Truck Co.*, 110 U. S., 490, 494, 496.

XII. (a) *The law of structure.* (Br., 22.)

There is very little "law of structure" in a tie plate. But if this rule has any application, it is a clear demonstration that defendants' tie plate reproduces the law of structure shown in tie plates and analogous devices prior to any Wolhaupter patent. This rule has no ap-

plication here because the prior art shows that the devices described in the letters patent, printed publications and in actual use were either styled and used as tie plates or in their use performed the functions of tie plates. Under *Potts* v. *Creager,* 155 U. S., 597, it would be difficult to distinguish the uses to which rail joints, rail chairs and tie plates are put as not kindred.

(b) *Modifications.* (Br., 22.)

The rule as to modification and design is not accurately stated and not as formulated, justified by the cases cited. The cases cited make for the defendants rather than for the complainant. The subject has already been discussed and the authorities cited. (Original Br., 34, 35.) *Hobbs* v. *Beach,* 180 U. S., 383, 392, distinctly lays down the rule that if the prior device did suggest to a skilled mechanic the modification, it would not be a creative thought whose presence would convert the mechanic into an inventor. *Hermann* v. *Youngstown Car Mfg. Co.,* 191 Fed., 579, is scarcely consolatory for complainant as it was declared that assembling old elements in one structure was not invention, unless they thereby performed a new combination function. Certain claims of the patent were held invalid because not complying with the rule, and other claims were held void for lack of patentable invention. Some claims were construed rigidly and held valid and as the exact device was employed held infringed. *Scaife & Sons* v. *Falls City Woolen Mills,* 209 Fed., 210, is square authority for what infringes if later anticipates if earlier, and that an ambiguous claim would be read in a more limited sense when necessary to sustain its validity, and the patent was sustained on a narrow construction.

XIII. *Non-use of patented devices.* (Br., 23.)

That a patent is not invalidated by failure to put it in use is not denied. The rule, however, is just as applicable to the letters patent cited in anticipation as to Wolhaupter patents. However, failure to use the device set out in a patent is evidence in support of limitation in construction. (*Autopiano Co.* v. *Amphion Piano Player Co.*, 186 Fed., 159.)

V.

The Argument.
(Br., 24-42.)

The discussions entitled "Track Evolution" (Br., 24, 25), "Earlier Conditions" (Br., 25-28), "Distinction between tie plates and rail joints" (Br., 29, 30) and "Destruction of track and wood ties" (Br., 31, 37) may be passed without detailed comment. All that is said may show the desirability of tie plates, but it certainly does not show or tend to show either that Wolhaupter first suggested tie plates or the desirability of the Wolhaupter tie plates as disclosed in his letters patent. On the contrary there is a complete refutation of efficiency when made in the identical or approximate Wolhaupter forms shown. Such tie plates would neither be of sufficient strength to prevent buckling, nor prolong the life of ties, nor give a firm seat to the rail, nor prevent rail-canting.

In the discussion of "flat-top plates" (Br., 38-40) there are unfounded assertions and the chart (Br., 39) is misleading. It must, though not so stated, be limited of course to tie-plate devices actually *used* and is plainly not intended to include prior tie-plate devices shown in letters patent and publications. The so-called Goldie claw is described as "flat top with shoulder and claw bottom" tie plate. This may be true, in part,

but with many exceptions, as actually manufactured (Rec., Vol. I, pp. 534, 538, 539, 544, 548, 810), but in the letters patent covering this form it was shown with a cavity across the top surface and lateral or side bearings supporting the rail bottom. The so-called "Goldie cross rib" tie plate is also described (Br., 39) as flat top with shoulder and cross-rib bottom, but as shown in the letters patent, as made, used, and sold to a great number of roads, this tie plate had a cavity across the top beneath the bottom of the rail and side supporting flanges with lower cross ribs directly beneath the flanges. (Rec., Vol. I, pp. 534, 538, 539, 544, Vol. II, pp. 799, 807, 819.) But even with these errors the chart is instructive. The flat top, flange bottom 1881 first Servis need only top surface channels parallel to the flanges to make the Wolhaupter 1895 shown opposite it. Both the House of Lords and this court, as well as other inferior tribunals, have declared that channeling a metallic plate is not invention. (Original Br., 23-25; Supplementary Br., 27-29.) All that Wolhaupter can claim to have done is to corrugate the top of the first Servis tie plate if corrugating, channeling or grooving be considered identical. The "channel plate," so-called, had no lower tie-engaging projections but was clamped over the sides of the ties. Could it be held invention to channel or groove the upper surface of what was already styled channeled iron or channeled plate? The Goldie cross rib plate, even as inaccurately shown on this chart, is identical with the last device styled "corrugated top cross rib bottom 1908" except as to cutting out two channels and making three bearings. In the Goldie patent and in manufacture, advertisement and use this plate showed an upper surface cavity and two rail bearings. (Rec., Vol. III, p. 1182, Vol. I, pp. 533, 537, 543, Vol. II, pp. 802, 818, 819, Vol. I, pp. 244, 434.) The same may be said

of the so-called flat top with shoulder, flat bottom 1893 plate compared with the plates in the opposite column marked "corrugated top flat plate 1904" and "corrugated top flat bottom 1905." The first is identical with the latter two except top channels. Under the decisions referred to such channeling is not patentable invention. This chart, however, is an unmistakable concession by The Railroad Supply Company that corrugated top flat bottom plates were first made in 1904 and corrugated top cross rib bottom plates first made in 1908.

But whether the transverse cavity in the Goldie tie plate and the lateral bearings consequent therefrom are to be treated as corrugations, channels or grooves, or not, or whether channeling the upper surface of a flat metallic plate is invention or not, this chart omits any and all reference whatever to the prior art as exhibited by letters patent and published articles. It is, therefore, entirely inadequate as an exhibition of the state of the art at the time the Wolhaupter patents came out, as shown in prior patents and printed publications and Wolhaupter is conclusively presumed to have knowledge of these. (Original Br., 35, and *Brown Portable Elevator Co.* v. *Interior Warehouse Co.*, 234 Fed., 649, 652; *Keene* v. *New Idea Spreader Co.*, 231 Fed., 701, 710-11; *Duer* v. *Corbin*, 149 U. S., 216, 223.)

The alleged inadequacy of the Servis tie plate is next discussed (Br., 40-42), and the superiority of the Wolhaupter forms asserted. It is a sufficient answer to this proposition, if it be of any force whatever, to recall that The Railroad Supply Company is manufacturing and selling at the present date the Servis tie plate along with the Wolhaupter (Rec., Vol. II, pp. 873-874), and cataloguing it under the style "The first successful longitudina

flanged tie plate, the Servis, manufactured and sold by The Railroad Supply Company" (Vol. II, p. 911) and the additional fact that the railroad engineers have found the Servis and Wolhaupter as described in the catalogue (Rec., Vol. II, pp. 901-922) equally objectionable. The Santa Fe so found them, so did the Southern Pacific lines and so did the Monon. (Rec., Vol. I, pp. 232-239, 311-312, 508.) (Vol. II, pp. 564-571.)

VI.

Patents in Suit.

(Br., 42-58.)

As the three Wolhaupter patents have already been thoroughly discussed and illustrated on our behalf (Original Br., pp. 18-31, Supplementary Br., pp. 6-9, 35-47), it is not proposed to repeat. It will be sufficient to call attention to the fact that Wolhaupter himself did not have the broad conception which is now sought by the construction of the *eighth* claim of his first patent, and that his idea was a trussed construction, because in the catalogue now, and presumably as to this element, continuously issued by the Railway Supply Company directs its attention to the special features of the Wolhaupter and Q. & W. plates made by it in the following language:

> "Arch Construction.
>
> Produces great buckling strength, and when flanges are imbedded in tie, compresses the fiber, making the wood hard resulting in a firm seat for the plate. Compression of fibers prevents decay and results in great adhesion to the tie.
>
> Bearing Surface.
>
> Plate so constructed that rail bearing surface is practically of equal thickness throughout the plate." (Rec., Vol. II, p. 914.)

Then opposite the word "Wolhaupter" is shown a

cross-section of a Wolhaupter plate without side shoulder, with four lower flanges parallel to the tie and three upper surface rail bearings. Again in a subsequent book bearing the copyright notice of 1907 by Railroad Supply Company, it is stated, opposite a plate called "Wolhaupter Shoulder Tie Plate" manufactured and sold by the Railroad Supply Company. (Rec., Vol. II, p. 927.)

> "We have recently added to the many forms of tie plates manufactured by us, a shoulder flange plate and are now prepared to furnish the standard form of Wolhaupter tie plate having a rail-sustaining shoulder rolled on its upper bearing surface as shown by the following illustrations."

The same catalogue also shows practically the same forms (Rec., Vol. II, pp. 929-931) and on a subsequent page (Rec., Vol. II, p. 932).

> "Compression Test.
>
> When a tie plate sinks into a tie below the bottom line of the plate, the tie is damaged by both the plate and the rail.
>
> The Wolhaupter flange plate is designed to overcome this difficulty by compression the fibers of the tie between the arch constructed under longitudinal flanges."

This catalogue (Rec., Vol. II, pp. 924-940) shows that when published in 1907 the Railroad Supply Company was adhering in all details to the patent theory of the arch and girder construction and flange parallel to the tie grain construction, in other words, advocating the Wolhaupter theory set out in the letters patent and evidencing this theory by tests, arguments and assertions. The cut styled "Cross-section first Wolhaupter Pat. in suit" (Br., p. 43) is a modified cross section of the letters patent and closely approximates the present commercial form.

It will be noted, however, that although the first Wol-

haupter letters patent (No. 538,809, May 7, 1895, Rec., Vol. I, 11-14) clearly and unmistakably show and describe a double rail-abutting upper side shoulder, no claim is made for this side shoulder either separately or in combination with any other feature. Yet, in the second Wolhaupter letters patent (No. 691,332 dated Jan. 14, 1902, Rec., Vol. I, pp. 15-17) where the same effect is produced by turning up each corner of the upper surface and flanges, there is a claim, in combination with other elements (Br., 49, Rec., Vol. I, p. 17), of an additional flange extending above the plane of the rail-sustaining flanges and adapted to receive the lateral thrust of the rail as a rail-abutting side shoulder. Even if this upper side shoulder was a new element in 1895, it was shown in the Wolhaupter patent of that date (538,809) as an element in connection with upper flanges and lower tie-engaging flanges, and the failure to claim it, either separately or in combination, was a complete abandonment of it both as an individual feature and as an element in combination. (Original Br., 68, 69.) Many of the authorities cited in the opposing brief flatly announce this rule. (See, also, *McClain* v. *Ortmayer*, 141 U. S., 419; *Keystone Bridge Co.* v. *Phoenix Co.*, 95 U. S., 274, 278; *Saunders* v. *Allen*, 60 Fed., 610; *Electric Gas Co.* v. *Boston Electric Co.*, 139 U. S., 481; *Vulcan Soot Cleaner Co.* v. *Diamond Powder Co.*, 237 Fed., 818, 822.)

It must also be noted that, having emphatically set out in the first letters patent No. 538,809, the desirability of having the lower tie-engaging flanges directly underneath, not the upper flanges, but the upper grooves as a desirable construction (Rec., Vol. I, p. 14, Claim 9), the second Wolhaupter letters patent laboriously proceed to demonstrate the desirability and utility of placing the lower tie-engaging projections in the same

vertical plane as the upper flanges. (Rec., Vol. I, pp. 16 and 17.) Evidently, the construction thought so desirable in 1895 had been found inadequate and insufficient in 1902.

Any comment or criticism on the sacred assertions and evidence of Maj. Charles R. Miller, an expert, whose qualifications as to tie plates were obtained by observing them in track from the rear of railroad trains under motion and seeing them in one switch in Joliet a few days before testifying (Rec., Vol. II, pp. 697-699) is omitted, because, in spite of this extensive experience, the assertions are so intrinsically and hopelessly inconsistent and self-destructive as to need no comment. This witness knows absolutely nothing about tie plates in construction, installation or operation. He a lawyer called for the purpose of endeavoring to establish by quibbles the interesting fact that a projection does not protrude and a cavity or channel is not a depression, and he most valiantly discharged the purposes of his retainer.

The Wolhaupter third patent. (Br., 50-54.) Here the combination is limited to the upper side shoulder and upper grooves or channels parallel thereto. (See letters patent No. 721, 644, P. R., Rec., Vol. I, p. 21.) It must be noted, however, that the lower tie-engaging projection in this device is still, as in the others, parallel to the tie and not transverse thereto.

It must also be recalled that the rail-abutting upper side shoulder and the upper flanges and cavities are shown clearly and unmistakably in the two prior Wolhaupter letters patent in suit No. 538,809 dated May 7, 1895, and No. 691,332 dated Jan. 14, 1902. (P. R., Vol. I, pp. 11, 15) and that in the former patent there is no claim whatever either separately or in combination for this upper side shoulder and in the latter it is claimed only in

connection with the two additional elements of upper rail-bearing flanges and lower tie-engaging flanges, all parallel to the grain of the tie and the latter in the same vertical plane as the former. This, again, under the authorities is a concession of priority, by failure to claim (Original Br., 62, 63), and constituted and abandonment not only of each element but also of the two elements in combination. The features were shown in combination in specifications for Wolhaupter and other prior letters patent. They were not claimed in these prior Wolhaupter patents either individually or in the double combination now sought in the third Wolhaupter letters patent. Therefore, they were abandoned both as separate and combination inventions.

It must also be kept in mind in considering the second and third Wolhaupter patents that in addition to the first Wolhaupter patent there were letters patent granted to Wolhaupter May 7, 1895, No. 538,809, claiming such upper side shoulders and lower tie-penetrating flanges only, in combination with such detailed additional elements and limitations that no claim for infringement is made. (Rec., Vol. III, pp. 1258 and 1259); also letters patent to Benjamin Wolhaupter dated May 23, 1897, No. 579,598 for tie plates showing an upper side shoulder to prevent lateral rail movement, and a continuous cavity or channel across the plate underneath the rail, but without claiming either separately or in any broad combination (Rec., Vol. III, p. 1294); also that on Jan. 14, 1902, No. 691,037, Wolhaupter patented a rail joint, the separate base or plate of which, in reality a tie plate, showed upper side-abutting shoulder and rail-bearing surface with a channel or groove extending transversely across the plate (Rec., Vol. III, pp. 1354-1361) Aluminum Model Defendant's Exhibit "O-14." The combination of these

features with spike holes, and other limitations was claimed, but it is not made the basis of this suit.

Thus, the record of Wolhaupter in the Patent Office prior to either one or to both of the second and third Wolhaupter letters patent is a demonstration that no broad combination of the elements of side rail-abutting shoulder, channeled upper surface and lower tie-engaging projections or any subcombinations of these features can be allowed as now asserted for the letters patent. Clear showing of these features in his own applications, his failure to claim, either separately or in such combinations as are exhibited in subsequent claims, are a demonstration of Wolhaupter's consciousness that at most alleged inprovements were narrow, technical and to be limited to the precise forms in which presented.

The so-called complainant's tie plate. (Br., 51-54.)

Immediately following the reproduction of the claims of the Wolhaupter third patent No. 721,644 appears (Br., 51) the following: "(Wolhaupter Pat. No. 721,644, Rec., Vol. I, p. 20.)" This is a reference to the specifications of these letters patent (third Wolhaupter) in the record. Then follows a cut taken from the record (Vol. I, p. 41) reproducing defendants' tie plate Ex. D. (Rec., Vol. I, p. 22) and underneath it are the words "Exhibit No. 14, Complainant's Tie Plate. (Rec., Vol. I, p. 41.)" An examination of the record at the place of reference shows two cuts of tie plates, Exhibit No. 12, styled "Illustration Complainant's Tie Plate" which reproduces the Harriman plate and beneath it a reproduction of the defendants' tie plate styled "Exhibit No. 14, Complainant's Tie Plate." These were introduced in evidence in connection with the deposition of Henry S. Hawley, president of the Railroad Supply Company and Hawley identifies defendants' tie plate (Rec., Vol. I, p.

22) as an exact duplicate of the tie plate manufactured by the Railroad Supply Company illustrated in No. 14. The cool audacity of styling either Complainant's Exhibit No. 12 (the Harriman plate) or Exhibit No. 14 (the Storey plate) "Complainant's Tie Plate," is rather startling. Hawley admits that his company first started to make tie plates of the type shown by Exhibit No. 12 for the Harriman Lines and has since continued. (His evidence was given June 7, 1909.) He also states that his company first made two plates like Exhibit No. 14 for the Santa Fe Road in May, 1908 (Rec., Vol. I, p. 46), was under the impression that the company rolled some of the plates in November but would like to look up the record. (Rec., Vol. I, p. 47.) He could not tell exactly how many of this Exhibit No. 14 were manufactured before the filing of the bill but knew two were manufactured and says he took an order from the Santa Fe Road for 20,000 tons of the plates before the bill was filed (Rec., Vol. I, p. 47) and this was as far as Hawley would go in his evidence. (Rec., Vol. I, pp. 48 and 49.) It developed, however, that his company made its proposition for this style of plates December 3, 1908, to the Santa Fe Road, received an acceptance December 4, 1908 (the suit was brought Dec. 9, 1908, in the Seventh Circuit), with prints and specifications from the Santa Fe Road. The Santa Fe Road was to purchase this style of tie plates from the Railroad Supply Company for three years with the right, however, to cancel the agreement, provided the future prices of the Railroad Supply Company were not as low as those made by others. The blue print showing the tie plate was submitted by the Santa Fe Railroad and Hawley could not tell who suggested the bottom ribs. (Rec., Vol. I, p. 54.) Exhibit No. 12 is referred to as the Harriman plate. (Rec., Vol. I, p. 90.) Bell in his diagram (Rec., Vol. I, p. numbered 199 just before

Rec., p. 115) puts down the Harriman plate as first made in 1904, also made in 1905, and the corrugated top, cross-ribbed bottom plate as first made (two plates) in 1905. All plates prior to 1904 made by the Railroad Supply Company had the corrugations parallel to the tie. (Rec., Vol. I, 120.) Bell admits that the changes of the top channels from lengthwise the rail to across the rail were made by Benjamin Wolhaupter or by Faulkner of the Santa Fe, as he understood the Santa Fe officials were in consultation with each other about the time the change was made but *thinks* that Wolhaupter made the suggestion because it would be natural for him to do so. (Rec., Vol. I, pp. 122, 123.) He also *thinks* the plate seeming like Exhibit No. 14 was made at the Dilworth, Porter Mill and sold to the Santa Fe Railroad in 1904, but corrects this by saying they did not have cross ribs on the bottom. He evidently don't know anything about it and is simply guessing (Rec., Vol. I, pp. 130, 131) and has no person knowledge on the subject. However, Bell admits that the Storey plate was first rolled by the Supply Co. for use in January, 1909. (Rec., Vol. I, 124.) The blue print for this plate was furnished by the Santa Fe Co. (Rec., Vol. I, 52.) The request for lower ribs came from Hodges. (Rec., Vol. I, 48.) Evidently, both the forms shown as Complainant's Exhibits 12 and 14, if any models were gotten up by the Railroad Supply Company, were the result of conferences with the Santa Fe officials and Bell admits that Wolhaupter and the officials were in conference in 1904 and that he, Bell, made the model referred to in 1907 after he had a talk with Faulkner and Robinson of the Santa Fe, from the latter of which he obtained a blue print (Rec., Vol. I, p. 135, 136), the model of June, 1908, was suggested by the Santa Fe purchasing agent in a request for a plate with ribs on the bottom. (Vol. I, p. 137.) Convincing proof

that Wolhaupter did not have anything to do with getting up the style of plates shown in Exhibits 12, 13, 14 and 15 is found in his evidence where he says in his evidence given June 30, 1909,

> "I could not consider a tie plate having a shoulder, top corrugations and under flanges, all parallel to to rail, satisfactory to me as I do not believe such type of plate is the best for use." (Rec., Vol. I, p. 197.)

That the Railroad Supply Company and Wolhaupter had anything to do with designing or suggesting plates like Complainant's Exhibits 12, 13 14 and 15 is denied most emphatically by the men who did originate them. (Faulkner report dated April 20, 1904, Vol. I, pp. 232-239, Storey, Rec., Vol. I, pp. 313, 315, 316.) There was no suggestion given to Storey by either the Southern Pacific Railroad or the Railroad Supply Company, or anybody connected with either. (Rec., Vol. I, p. 315.) John Dove Isaacs (Rec., Vol. I, pp. 448-453) and John H. Wallace contemporaneous with the Santa Fe engineers got up the so-called Harriman plate. (Exhibit 12.) (Rec., Vol. I, p. 468, Vol. II, pp. 558-561, 575, 576, 582.) There was no interchange of ideas or conference between the officials or engineers of the Santa Fe Road and Southern Pacific Systems in reference to tie plates prior to the appearance of the Harriman plate. (Rec., Vol. II, p. 582.) This question has also been discussed. (Original Br., 81-84.) In the face of this evidence, it is an arrogant assumption, totally unfounded, to style either the Harriman plate or the Storey plate "Complainant's Tie Plates." Complainant never had anything to do with devising or planning them but simply made them in 1904 or 5 for the Southern Pacific System (Exhibit 12, Harriman Plate), and then for the Santa Fe Road, Exhibit 12 in 1904, or 1905, and Exhibit 14 after

the commencement of this suit. Both railroads wanted tie plates cheaply made and if they could get these types from the Railroad Supply Company as cheap, or cheaper, as from other sources, they naturally accepted the chance. Hence the assertion that they are "Complainant's Tie Plates."

Wolhaupter's Three Inventive Concepts. (Br., 54-58.)

This discussion with the illustrations is a model of sophistry. Instead of showing the Wolhaupter patent constructions as illustrated and described in the patent specifications (Rec., Vol. I, 11-14), the form of a flat, not a trussed plate, with a side shoulder, grooved or channeled upper surface with the grooves and bearings parallel to the rail and crosswise of the tie and lower tie-engaging projections also parallel to the rail, that is the Storey plate, is selected and Wolhaupter is said to have been the originator not of the rail-abutting side shoulder but of the upper surface channels and lower tie-engaging projections. This completely ignores the state of the art, changes the direction of upper grooves and flanges and tie-engaging flanges of the Wolhaupter patents, discards the theory of the inventor and of course ascribes both the Harriman (Exhibit 12) and Storey (Exhibits 14 and 15) tie plates to Wolhaupter directly, contrary to the proof, and in entire disregard of the prior patents, publications and tie plates used.

The drawing (Br., 55) illustrating the supposed invention covered by the second Wolhaupter patent exhibits exactly the same construction as the prior figure, only there is not quite so much invention, because in the first figure the whole of the tie plate underneath the rail is claimed as the invention and, in the second, only a

part of it. (For the real Wolhaupter device, see Rec., Vol. I, 15-17.)

However, there was still another Wolhaupter "happy thought" or "invention" in the third patent (Br., 57) and here for the first time, the asserted invention includes the upper rail-abutting shoulder, and the entire upper rail supporting surface, channels and flanges, all variant from the actual device. (Rec., Vol. I, 18-21.) To be sure, the rail-abutting shoulder, the upper surface channels and bearings and the lower tie-engaging projections are shown in combination in his two prior structures (Br., 54 and 55) and in the patent specifications, but in the last patent it seems the invention or "happy thought" or "concept" consisted in putting together the rail-abutting shoulder, upper surface channels and bearings and omitting so far as asserted invention is concerned, the lower tie-engaging projections. Practically the results of this illustration and argument are to show all these "happy thought" or "concepts" in the prior art (Original Br., 36-61, Supplementary Br., 18-26) and that Wolhaupter invented nothing. The suggestion that the shoulder is only one element and therefore can be claimed in combination with the channeled surface fails, because according to the illustrations both upper side shoulder and channeled rail-bearing upper surface are together in the first two letters patent. (Rec., Vol. I, 11-14, 15-17, 18-21.)

VII.

Utility Evidenced by Large Sales and Public Recognition.

(Br., 59-68.)

This subject is discussed at considerable length under the various subheads of "Large sales" (Br., 59-63), "the Harriman license" (Br., 63-65), "Gold medal award" (Br., 56) and "remarkable showing of public acquiescence" (Br., 66-68). According to the argument based on the evidence of Hawley and Bell the Wolhaupter tie plates are practically the only form used in the United States. The assertions need but little consideration in order to demonstrate their lack of foundation. It is evident that the statement of Hawley that

> "our tie plates are standard on most of the large railroad systems in the country"

is misleading, for Supply Company tie plates and Wolhaupter tie plates are not by any means identical and that company manufactures various forms of tie plates, as shown by its catalogues. (Rec., Vol. II, pp. 901-940.) The statement that there were no corrugated top tie plates manufactured or sold or used prior to the year 1895 (Br., 160) may be true if the term "corrugated" is used in its strictest sense, but it fails of truth, so far as tie plates with top cavities, channels and grooves is concerned, Goldie (Rec., Vol. II, pp. 793-813), Schleiter (Rec., Vol. II, pp. 818, 820), and ignores the facts that in the statistics of sales (Br., 61) the Harriman and Storey plates are included as "corrugated" top and Wolhaupter plates, which is a begging of the entire question, so far as this litigation is concerned (Rec., Vol. II, p. 873), and that, of the so-called corrugated top tie plates, about 50 per cent. sold, have the corrugations parallel to the rail and not to the tie as the Wolhaupter theory requires. (Rec., Vol. I, pp. 120, 121.)

It must also be remembered that there are a number of tie plate manufacturing establishments on the market other than the Supply Co. The Elyria Iron & Steel Company is supplying the Lake Shore & Michigan Southern Ry., the Michigan Central, and a number of other railroads. (Rec., Vol. I, pp. 489-490.) It makes large quantities of other styles of tie plates. (Rec., Vol. I, p. 489.) The Beaver Dam Malleable Iron Co. is a large manufacturer, supplying tie plates to the Chicago, Milwaukee & St. Paul R. R. Co. (Rec., Vol. I, p. 447.) The Spencer Otis Company manufactures and sells tie plates and since 1902 and has sold or does sell to the following roads:

> "Adirondack & St. Lawrence; Atchison, Topeka & Santa Fe; Atlantic Coast Line; Arizona & New Mexico; Ann Arbor; Boston Elevated; Baltimore & Ohio; Bay Point & Clayton; Coney Island & Brooklyn; Chicago & Oak Park Elevated; Calumet & Hecla; Chicago, Rock Island & Pacific; Detroit, Toledo & Ironton; Gulf, Colorado & Santa Fe; Interboro Rapid Transit; Illinois Central; Kansas City, Mexico & Orient; Long Island Railroad; Lake Superior & Ishpeming; Metropolitan West Side Elevated; New York, Ontario & Western; Norfolk & Western; North Side Street Railway; Oglesby & Granville, Terminal Railroad Association of St. Louis; Tidewater Railway; Utah Copper Company; Virginian Railway; Western Maryland Railway; Yazoo & Mississippi Valley; Yosemite Valley." (Rec., Vol. I, p. 472.)

as well as to a number of additional railroads while representing the Hart Steel Company. (Rec., Vol. I, p. 471.) The Sellers Manufacturing Company supplies tie plates to the Illinois Central; Chicago & Northwestern; Chicago, Burlington & Quincy; Chicago, Rock Island & Pacific Railroads, and has an annual output of about 20,000 tons of tie plates. (Rec., Vol. I, p. 500.) The Dilworth, Porter Company, of Pittsburgh, also manufacture and sell tie plates to a large extent and is manufacturer of the Goldie plates. (Rec., Vol. II, pp. 815-820.)

All these plates are so variant from any alleg
Wolhaupter invention that it is not even claimed that
patents, under the broadest construction, have been
fringed thereby and all these mills own their mills.
great number of leading roads either never have used
Wolhaupter tie plate or have used only a limited qua
tity, or, after use, have discarded Wolhaupter plates
a different type, such as the Illinois Central (Rec., V
I, 479-483); Chicago, Burlington & Quincy (Rec., Vol.
483-487); Chicago, Rock Island & Pacific (Rec., Vol.
498); Chicago & Northwestern Ry. (Rec., Vol. I, 501-505
Philadelphia & Reading Ry. (Rec., Vol. I, 506); Pen
sylvania Ry. (Vol. I, 505); Monon Railroad (Rec., V
I, 507-512); Chesapeake & Ohio R. R. (Rec., Vol. I, 515
Baltimore & Ohio R. R. (Rec., Vol. I, 516); Chicago
Eastern Illinois (Rec., Vol. I, 515); Chicago & Alt
R. R. (Rec., Vol. I, 500-501); Chicago, Milwaukee &
Paul R. R. (Rec., Vol. I, 469); Lake Shore & Michig
Southern Ry. (Rec., Vol. I, 489) and Michigan Central
(Rec., Vol. I, 489); Chicago, St. Paul, Minneapolis
Omaha (Rec., Vol. I, 489); Big Four (Rec., Vol. I, 489
Lehigh Valley; Grand Rapids & Indiana; Vandal
Georgia Central; Hocking Valley, and others. (Re
Vol. I, p. 490.) Also a number of other roads mention
as patrons of the Elyria Iron & Steel Company (Re
Vol. I, p. 490) and Spencer Otis Company (Rec., V
I, p. 472.)

The Illinois Central R. R.; the Atchison, Topeka
Santa Fe; Southern Pacific Railroad Systems; Chicago
Alton and Monon Railroads found the Wolhaupter plat
unsatisfactory after experiment and use, and substitut
new ones.

That the Wolhaupter tie plates were unsatisfactory
shown conclusively by the fact that the Harriman a

Storey plates were gotten up by the engineers of the railways. (Rec., Vol. I, 201, 450.) The increased sale of these plates by the Railroad Supply Company is accounted for, not by the fact of the desirability of Wolhaupter's alleged inventions, for the farther the manufacture of the Supply Co. got away from the impracticable Wolhaupter styles the more its sales increased, may be easily attributable to its extensive system of solicitation and advertisement and keeping in touch with the trade. (Rec., Vol. I, 44, 83) and increased demand for the plates. Possibly, as the Supply Co. has only a small mill and farms out its contracts to large rolling mills, the superior quality may have a great deal to do with the extensive sales. (Rec., Vol. I, pp. 44, 45, 50, 80, 81, 85.) (136 Fed., 841, 849; 119 Fed., 696, 703.) The Railroad Supply Company is also a sort of an amalgamation of a number of prior tie plate companies. (Rec., Vol. I, 43, 147.)

As general use and commercial success are only pertinent in cases of doubtful validity the anxiety with which counsel endeavor to array the statistics of a commercial use of the alleged Wolhaupter devices so as to produce an erroneous impression of their public popularity, suggests such a strong doubt as to the patentability even of the narrow forms shown in the Wolhaupter patents and an attempt to bolster up those patents by the rule that prompt and universal acceptance of an *invention* is an evidence of patentable invention. All this parade of alleged public popularity of Wolhaupter plates, in order to bring the case under the rule, fails both because the facts do not show popularity and universal use either of the patented device or the modified commercial form of the Wolhaupter patents, and because lack of patentable invention is here so clearly shown that recognition by the public is im-

material. The leading cases in the Supreme Court voicing the rule are:

McClain v. *Ortmayer,* 141 U. S., 419, 428.
Adams v. *Bellaire St. Co.,* 141 U. S., 539, 542.
Manufacturing Co. v. *Cary,* 147 U. S., 623, 635.
Grant v. *Walter,* 148 U. S., 547, 556.
Duer v. *Corbin Cab. L. Co.,* 149 U. S., 216, 223.
Knapp v. *Morss,* 150 U. S., 221, 227.
Olin v. *Timken,* 155 U. S., 141, 155.

In *Grant* v. *Walter,* 148 U. S., 547, the rule is laid down (p. 556):

> "The advantages claimed for it, and which it no doubt possesses to a considerable degree, cannot be held to change this result, it being well settled that utility cannot control the language of the statute, while limits the benefit of the patent laws to things which are new as well as useful. The fact that the patented article has gone into general use is evidence of its utility, but not conclusive of that and still less of its patentable novelty. *McClain* v. *Ortmayer,* 141 U. S., 419, 425, and authorities there cited."

Decisions of lower courts stating and applying the rule are:

Saunders v. *Allen,* 60 F. R., 610, 612.
Dalby v. *Lynes,* 64 F. R., 376, 381.
Codman v. *Amia,* 74 F. R., 634, 636.
Dueber Watch Case Co. v. *Robbins,* 75 F. R., 17, 26.
Klein v. *Seattle,* 77 F. R., 200, 204.
Lane v. *Welds,* 99 F. R., 286, 292.
Standard C. & W. Co. v. *Caster S. Co.,* 113 F. R., 162, 166.
Am. Sales Book Co. v. *Bullivant* (C. C. A., 9th Cir.), 117 F. R., 255, 259.
Union Bis. Co. v. *Peters,* 125 F. R., 601, 609.

Voightmann v. *Weiss & Ridge Cornice Co.*, 133 F. R., 298, 304; 148 F. R., 848, 853.
Hotel Co. v. *Lorraine Co.*, 155 F. R., 298, 301.
Tubelt Co. v. *Friedman*, 158 F. R., 430, 439.
Fellows v. *Bordens Con. M. Co.*, 180 F. R., 421, 439.
Boss Mfg. Co. v. *Thomas*, 182 F. R., 811, 814.

The Harriman License. (Br., 63-65.)

After the Southern Pacific System got up the so-called Harriman plate and began its manufacture, the Supply Company claimed (and this is an open acknowledgment by the Railroad Company that it had nothing to do with the origin of the Harriman plate) that it infringed the Wolhaupter letter patent No. 721,644 and as it offered a shop license allowing all the lines of the Southern Pacific System to make that style of plate at their mills at a nominal royalty and itself also to manufacture on satisfactory terms for the Southern Pacific Lines, the license was accepted. There was under these concessions clearly no inducement to the Railroad Company to litigate either the validity of the letters patent specified or the infringement thereof by the Harriman plate. It will be noticed that this license (Rec., Vol. II, p. 876, 879) not only gives a shop right under this patent to the five Southern Pacific Lines, but also under all Supply Co. patents. The royalty is One Dollar. The license is not for a single shop, but it is a license and privilege to five railroad companies, or any companies owned by them for "manufacturing at their own shops or mills and for their own use rolled steel flat-bottomed tie plates of the forms or patterns illustrated in the drawings." This was the Harriman plate. The manufacture was to be without restriction under letters patent No. 721,644, or any other letters patent then or thereafter owned or controlled by

the Supply Co. (Rec., Vol. II, p. 877.) All claims for damages are released and no further royalty or license fee was to be paid by the Railroad Companies. (Rec., Vol. II, p. 878.) The Railway Lines admit and acknowledge the validity of the letters patent No. 721,644, etc., but "only during the period to which the contract embodied in the proposal of even date for furnishing tie plates shall continue in force and effect, and not longer." It is submitted that such a license as this, instead of a recognition of the validity of letters patent is cogent proof of its invalidity or noninfringement and shows a great apprehension on the part of the owner that its letters patent are invalid or are not infringed. The manufacturing contract referred to is not included, but is referred to (Rec., Vol. II, p. 876), as in effect that the Supply Co. has, by letter of even date, proposed to furnish the Railway Lines in accordance with their requirements of tie plates of the form and pattern illustrated. Of course, this arrangement is not in any way binding upon the defendants or the Santa Fe Company and is immaterial on the issues of validity and infringement. But it is submitted that if Wolhaupter letters patent No. 721,644 are as clearly valid and as plainly infringed by the Harriman plate as is herein claimed, it is most remarkable that the Supply Company should grant a shop right or license without royalty for that and all its other patents to the railroad companies, release all claims for past infringements, enter into a desirable contract from the railroad companies' standpoint to furnish tie plates of this pattern at a satisfactory price, and finally that the recognition of the validity, ownership and incontestability of the patent should be limited to the period of the manufacturing contract and not made coextensive with the period of the letters patent.

The statement (Br., 65) that the Santa Fe and Harriman Systems were the only infringers prior to the beginning of this suit is not substantiated. It was clearly shown that in 1904, another tie plate company made plates like the Harriman plates for the Santa Fe Road, and there does not seem to have been even a threat of suit. (Rec., Vol. I, 217.) This was the Independent Railway Supply Co., represented by Wolhaupter, but his patents had been assigned. (Rec., Vol. II, 884, 886, 888, 899.)

Gold Medal Award. (Brief, 66.)

The gold medal award at the St. Louis Exposition, with one of the vice presidents of the Santa Fe as a member, is also urged as proof of novelty and invention in the Wolhaupter devices. It does not appear that this jury had any power to or did consider the questions of novelty, invention, patent merit, validity of patents or the relative merits of different tie plates. According to oral testimony the Supply Company had an exhibit at the exposition and got a gold medal award, but what was included in that category is not known. Rec., Vol. II, 868.) The award was for general merit upon tie plates, crossing alarm block signals and railway supplies and the diploma gave the company the privilege of purchasing three different gold medals from the exposition. Wolhaupter tie plates are not mentioned. (Rec., Vol. II, opp. p. 868.) It was simply a certificate of good construction which was nowise due to the Supply Company because, with slight exceptions, it farms out its manufacturing contracts to other establishments. The evidence about this award will be found (Vol. II, pp. 867-869), where the award itself is reproduced. The award reads:

"United States of America
Universal Exposition Saint Louis MDCCCCIV
Commemorating the Acquisition of the Louisiana Territory
The International Jury of Awards has Conferred a Gold Medal
upon
The Railroad Supply Company
Tie Plates Crossing Alarm-Block Signals and Railway Supplies
Signatures of Officials."

It amounts to nothing.

Nor do the dealings between the Santa Fe Co. and the Supply Company by the purchase from the Supply Company of a large number of tie plates during this litigation tend to substantiate or constitute any recognition of the validity of the Wolhaupter patents or the infringement thereof by the Storey device. The order, and all subsequent orders, between the two were to be and were based on prices satisfactory to the Railroad Company, and the Supply Company agreed that the proposed three years' purchase of tie plates which had grooves, ribs or corrugations on the top surface thereof, from the Railroad Company was with the distinct understanding that the Santa Fe might cancel the agreement, provided future prices made by the Supply Company were not as low as made by others. The alleged utility of the Wolhaupter inventions, even if found in the Storey plate, absolutely vanish, the letters patent cut no figure in the dealings, and these dealings are placed upon the sole basis of competition by other tie plate companies. There is no royalty or license fee payable to the Railroad Company or recognition of the validity of any Wolhaupter patent or that the Storey plate is an infringement of any Wolhaupter patent. It is simply a commercial transaction in which the letters patent are ignored by both parties. (Rec., Vol. I, p. 52.) This ar-

rangement could hardly be called a contract under the laws of Illinois, but is simply an option to the Santa Fe Company to take tie plates of this form from the Supply Company at prices as low as any other tie plate manufacturer might quote and is illegal. *Schneider* v. *Turner,* 130 Ill., 28; *Corcoran* v. *Lehigh Coal Co.,* 138 Ill., 390. It certainly cannot be urged as an acknowledgment of or estoppel to deny the validity of the letters patent or urge non- to deny the validity of the letters patent or urge noninfringement. Acknowledgments of the validity and estoppels to deny the validity of letters patent are contrary to public policy because the public is interested, and therefore are construed with the greatest strictness and must be in terms clear beyond doubt. A licensee can always deny infringement. *Pope Mfg. Co.* v. *Gormully,* 144 U. S., 224, 234; *Haughy* v. *Lee,* 151 U. S., 282, 285. It is submitted, however, that the conduct of the Santa Fe Road, although it has guaranteed the defendants against loss by suit for infringement of any letters patent through the manufacture of the Storey plate, does not and cannot in any way prevent the defendants from urging both invalidity and noninfringement of the Wolhaupter patents.

VIII.

The Prior Art.
(Brief, 68-130.)

(a) *Few patents considered.* (Brief, 68-71.)

Criticism is indulged in on account of the number of prior patents given in evidence. This criticism has always been made below but has never met with approval by any court. Of course, there are varying degrees of similarity between the anticipatory prior patents, devices and publications, and the Wolhaupter devices, but all are

proper as showing the state of the prior art on the questions of novelty, invention, anticipation and construction of claims. *Holt Mfg. Co.* v. *Best Mfg. Co.*, 172 Fed., 409, 411; *Boss Mach. Co.* v. *Thomas*, 182 Fed., 811, 813; *H. D. Smith Co.* v. *Southington Mfg. Co.*, 235 Fed., 160, 163; *Dunbar* v. *Meyers*, 94 U. S., 187, 198-199. It is also true that some of the prior devices exhibited only rail-abutting shoulders, some only rail-abutting shoulders and upper-surface channeling or corrugating; some upper corrugating and lower tie-engaging projections; some upper side shoulders and lower tie-engaging projections; while many exhibited all these features in combination. But such prior patents are properly shown and considered. *Ft. Pitt Supply Co.* v. *Ireland & Mathews Mfg. Co.*, 232 Fed., 871, 874; *Zimmerman* v. *Advance Machinery Co.*, 232 Fed., 866, 870; *H. D. Smith Co.* v. *Southington Mfg. Co.*, 235 Fed., 160, 165; *Dunbar* v. *Meyers*, 94 U. S., 187, 198. It is submitted, however, that all the references are pertinent on the question of novelty, construction and infringement of the Wolhaupter patents. This is especially the case in view of the extended argument on "Track Evolution," "Early Conditions," "Distinction Between Tie Plates and Rail Joints," "Destruction of Track and Wood Ties," "Tie Plate Requirements," "Flat Top Plates," etc., which is based on the unwarranted assumption that the Wolhaupter devices were pioneer in character.

These prior patent citations are therefore not to be calmly brushed aside and disregarded. (Br., p. 69.) Each citation is pertinent to the issues.

Nor is the evidence of Henry W. Carter, defendants' expert (Rec., Vol. I, pp. 344-433, 517-521), to be construed as rejecting any one of these patents as pertinent and proper to the issues. He says (Rec., Vol. I, p. 348):

"The large number of patents of the prior art

which have just been introduced in evidence, amply illustrate my statement that such devices as tie plates may be made up in an almost endless variety of shapes and styles. It would serve no good purpose, however, for me to discuss in detail each of the many different constructions which these patents disclose. I shall simply call attention to such of these constructions as are most pertinent in connection with the comparison with the Wolhaupter tie plate of the patent in suit, which the question calls for."

Carter then proceeds to discuss in detail in connection with claim eight of the first Wolhaupter patent what he considers to be the *most pertinent* prior devices and in that connection examines patent No. 203,570 to I. Wells (Rec., Vol. III, p. 1095; Vol. I, pp. 348-352; patent No. 249,407 to D. Servis (Rec., Vol. III, p. 1092; Vol. I, p. 352); patent No. 280,030 to W. F. Gould (Rec., Vol. III, p. 1098; Vol. I, p. 353); patent No. 462,399 to P. C. Dockstader (Rec., Vol. III, p. 1158; Vol. I, p. 354); patent No. 469,386 to C. H. Dunham (Rec., Vol. III, p. 1169; Vol. I, pp. 355-357); and patent No. 485,030 to W. Goldie (Rec., Vol. III, p. 1182; Vol. I, pp. 357-358), and then briefly calls attention (Rec., Vol. I, pp. 358-362) to patent No. 492,528 to J. Churchward (Rec., Vol. III, p. 1192); patent No. 494,692 to B. Reece (Rec., Vol. III, p. 1196); patent No. 508,086 to J. Churchward (Rec., Vol. III, p. 1207); patent No. 524,868 to D. Servis (Vol. III, p. 1232); patent No. 529,854 to S. F. Clark (Rec., III, p. 1236), which he says are particularly referred to because of the resemblance thereto of defendants' tie plate. In his judgment the Reece patent No. 494,692 (Rec., Vol. III, 1196) shows a construction corresponding much more accurately to claim 8 of the Wolhaupter patent than defendant's tie plate does, specifying the resemblance. (Rec., Vol. I, p. 359.) His conclusion is that claim eight shows no patentable novelty. Wolhaupter, No. 538,809. (Rec., Vol. I, 14; Rec., Vol. I, 362.)

Carter's conclusions as to infringement of claim 8 are that he does not find in defendants' infringing tie plate the embodiment of any novel construction defined by claim 8 of the Wolhaupter first patent. (Rec., Vol. I, p. 362.)

He then examines and considers the prior art in connection with the Wolhaupter second letters patent No. 691,332 (Rec., Vol. I, pp. 15-17); discusses the Wells patent, No. 203,570; Goldie patent, No. 485,030, and the Reece patent No. 494,692, and concludes that there is neither infringement nor invention, unless claims are limited to exact construction shown, of the two Wolhaupter letters patent, nor infringement thereof. (Rec., Vol. I, pp. 364, 366-7, 368, 369.) Carter's discussion of the third Wolhaupter letters patent both as to validity and infringement is based upon the same patents already discussed with additions of Wolhaupter patent No. 579,509 (Rec., Vol. III, p. 1294); Wolhaupter patent No. 691,037 (Rec., Vol. III, p. 1354) with brief references to patent to C. H. Dunham No. 469,386 (Rec., Vol. III, p. 1169); patent to W. Goldie No. 610,179 (Vol. III, p. 1318); patent to W. Goldie No. 631,039 (Vol. III, p. 1325); patent to G. K. Kinney No. 631,873 (Vol. III, p. 1329); patent to R. B. Charlton No. 649,629 (Vol. III, p. 1342); patent to H. W. Avery No. 662,850 (Vol. III, p. 1346); patent to J. M. Sellers No. 684,466 (Vol. III, p. 1350); and patent to W. S. Jones No. 691,317 (Vol. III, p. 1363), and he concludes as to third Wolhaupter patent No. 721,644 (Vol. I, pp. 18-21), that every feature of the construction defined by its claims is repeatedly disclosed in the prior art both separately and together in the same relation as in the patent set forth. (Rec., Vol. I, p. 378.) (Discussion of third Wolhaupter letters patent as to novelty and invention, Rec., Vol. I, 370-379.) He also adds:

"If no other prior art was disclosed than these

two sets of patents last mentioned, therefore, I would still consider the claims in issue devoid of substantial novelty, in view of the lack of co-operation or combination between the features of the channeled rail-bearing surface and the rail-abutting shoulder. However, the patents to Wells, Dockstader, Goldie, Gould and the prior Wolhaupter patents No. 691,037, and No. 579,509, show that it was also common in the prior art to employ these features together and in the same relation which the patent in suit sets forth." (Rec., Vol. I, p. 378.)

He then summarizes his views as to the third Wolhaupter patent by saying that the two claims relied on fail to express or state for the reasons given, any novel construction whatever, and simply recite features which were old in art, in this line of devices, both individually, and embodied together in the same tie plate structure, and that to the extent that defendants' tie-plate construction employs similar features, it does so in common with the devices of the prior art, and as result of the disclosures of the prior art instead of any disclosures of this Wolhaupter patent (Rec., Vol. I, p. 379), and his opinion as to the construction of these claims and non-infringement thereof by defendants' tie plate follows. (Rec., Vol. I, p. 380.) The attempt to misconstrue and misapply the testimony of Carter by the quotations from his evidence (Br., p. 69) is shown by what immediately proceeds the quotations, in which he says that there are so many points of view from which this first Wolhaupter patent in suit can be considered that he is unable to answer the question as to the most pertinent reference by reference to any single patent. (Vol. I, p. 389.) The entire discussion on this subject is too long to be quoted or summarized and is best understood by perusal. (Vol. I, pp. 388-391.) It must be recalled also that Carter was not supplied with the Railroad Gazette or Eisenbahn Geleise

prior publications or Hudson Patent (Rec., Vol. III, 1079), in connection with his testimony, but subsequently identified the aluminum models of the publications as correctly exemplifying the Gazette descriptions. (Vol. I, pp. 517-521.)

There exists no diversity of view between counsel in this case or between counsel and Carter, as intimated at various points in the brief. (Br., 68.) The original brief has the approval and bears the signatures of all counsel and the supplementary brief is simply an elaboration without repetition of some details which it was not thought advisable to include in the original brief. If this plan of presenting the case is objectionable it is simply an error of judgment and not in any way indicative of diversity of opinion, and no inconsistencies will be found.

Nor is there any diversity of opinion between counsel and expert in this matter. Out of the mass of prior anticipations, which all evidently had the approval of the expert as to relevancy, there were selected by him what he considered the most applicable and pertinent prior patents. According to his express statement this is not a repudiation of the prior patents not specifically referred to and as a matter of fact general reference is made to all as of weight in his conclusions. (Rec., Vol. I, 348, 359, 388.)

(b) *Dockstader Patent No.* 462,399. (Br., 71-74.)

As these letters patent are shown in full (Vol. III, p. 1158), examined heretofore (Original Br., 46-47, Supplementary Br., 58-59), thoroughly discussed by Carter (Rec., Vol. I, 354, 375), and exemplified by aluminum model Exhibit "O-7," it is not proposed to go into details except to point out that it is not true that Carter did not cite the Dockstader patent as an anticipation o

the Wolhaupter patents (Rec., Vol. I, pp. 354, 375), and that the Dockstader device is interesting as showing how rail braces, rail chairs, rail joints and tie plates shape into and combine with each other. This device embodies the functions of each and all of these track devices, and both as it appears and if cut off immediately above the base plate, the Dockstader device would make a practical and valuable tie plate. (See cut supplemental brief, p. 58.)

The attempted distinction between rail joints, rail chairs and tie plates because of the alleged freedom of the rail to move on the tie plate and its firm connection in the rail chair and rail joint is no distinction whatever and as a matter of fact does not exist. For instance in the rail chair of I. Wells, No. 203,570, May 14, 1878 Vol. III, p. 1088), the rails are perfectly free. There is opportunity for vertical rail movement in the chair and the rail is not in any way clamped, fastened or attached to the chair while the chair is separately bolted to the ties. In the Dunham patent, No. 469,386, dated February 23, 1892 (Vol. III, p. 1169), and purchased by Wolhaupter and then the Supply Company, the rail is spiked to the tie through the plate, necessarily resulting in a rigid attachment. So in patent to W. Goldie, No. 485,030, dated October 25, 1892 (Vol. III, p. 1182), the tie plate, which is described was used and is conceded to be a tie plate, the rail is spiked through the plate to the tie. See also exhibits of complainant "B" and "C" which were Goldie tie plates of this form in actual use for 14 years, and in patent to J. Churchward, No. 492,528, February 28, 1892 (Vol. III, p. 1192), the lower flange of the tie plate is imbedded in the tie crosswise and the rail is spiked to the tie through the tie plate. There is therefore no foundation in fact for the alleged distinction between rail joints

and rail chairs on the one hand and tie plates on the other because of the method of attachment, and even if there were it would not distinguish them as kindred devices, because both are placed between the rail and the tie for the purpose of securing alignment and preventing spreading and wearing of the tie. (See Original Br., 34, 31, and *Harwood* v. *Gt. Northern Railway Co.*, 2 B. & S., 194, 11 H. L. C., 667, 685.)

It is clear that there would be no violation of the law of structure in the Dockstader device to cut off the top of it so that the tie-plate portion of it would do exactly what it does in the device as a whole, which is by rail-abutting upper-side shoulders to keep the rail in place, support the rail base upon two bearings separated by a channel, maintain a firm seat in the tie by lower tie-engaging projections, and protect the tie by having a greater metallic surface thereon than the rail base. No tie plate can do more than this for the Dockstader device does everything a tie plate can. The fact that the upper surface bearings contain upper projections for locking in the rails is irrelevant. A patentee is entitled to all the uses and benefits of his invention whether known to him or not. *Toch* v. *Zibell Damp Resisting Paint Co.*, 233 Fed., 993, 997; *O'Brien-Worthen Co.* v. *Stempel*, 209 Fed., 847, 852.

The reference to *Topliff* v. *Topliff* about violation of the law of structure and the quotations from *Faries Mfg. Co.* v. *Brown* and *Loom Co.* v. *Higgins* (Br., 73, 74), have no application.

It must be recalled that the entire case for the Supply Co. is based upon the assumed validity of the Wolhaupter patents under broad constructions of the claims so as to make them include channeled upper surfaces for tie plates in connection either with rail-abutting side

shoulders or lower tie-engaging projections, or both. The record demonstrates prior patents, formal descriptions and actual use of, not only of all of these features separately, and in two by two combinations, but of all of them in triple combinations. (Original Br., 51, 53, 58, and Supplementary Brief, 18-27.) It is submitted that in the chart reproduced (Br., 39; Rec., Vol. I, 106-107) counsel have shown this to be the fact. This chart shows the Goldie cross-rib tie plate as flat on top but with rail-abutting side shoulder and lower tie-engaging projections, ignoring the fact that the Goldie device was both shown in the letters patent and used on numerous railroads with its upper rail-supporting surface formed by two bearings separated by a cavity, depression or groove, on which rail bearings the rail bottom rested, spanning the cavity.

It was not invention to put one or more channels across the plate underneath the rail bottom so as to make bearings on which the rail bottom rested. The two highest tribunals in England and the United States have so held and a number of others. Any mechanic with a tie plate before him could do this. It did not require the eye of genius or invention to discern and add this element even if it had not existed before, hence what is said in the cases cited has no application. (Original Br., 21-25, Supplementary Br., 27.)

(c) *Dunham* 1892 *Patent No.* 469,386. (Br., 74-79.)

This patent is so simple and is shown so clearly by the letters patents (Vol. III, p. 1169) and its structure and functions so clearly described by Carter (Rec., Vol. I, p. 355) that a new detailed discussion of it will not be indulged in. It is certainly a tie plate with a corrugated or channeled upper surface (Bell, Rec., Vol. I, 142 and Wolhaupter, Vol. I, 183-186) and lower flanges which will,

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to some extent, engage in the tie. It is placed lengthwise of the tie and certainly the two outer flanges are sharp enough to go in under pressure. It is claimed that this is cited by Carter as anticipatory of the first Wolhaupter patent but not as to the second and third as it is without an upper rail-abutting side shoulder, but it is cited by Carter in connection with his discussion of the third Wolhaupter patent. (Vol. I, p. 378.) As to the second form of the Dunham patent with a flat surface and corrugations on the bottom, it certainly would not require any flash of inventive genius to turn it upside down and then produce a corrugated upper surface free from the objections so eloquently urged, such as flattening out, refusal to imbed in the plate, etc. If rail bottoms can cut into the tie deeply, even crosswise of the grain, as is insisted by Bell (Br., 33, 34, 35; Rec., Vol. I, pp. 93, 99, 100, 102) the Dunham plate placed lengthwise of the grain of the tie would imbed to a certain extent. Any theoretical objection as to flattening would be readily remedied by making the plate thicker and stronger. But neither Wolhaupter nor Supply Company is in a position to deny the utility of the Dunham patent. Wolhaupter bought it, assigned it to Gregg and the Q. & W. Co. and the Supply Company acquired and held it at its expiration. (Rec., Vol. I, 142, Vol. II, 885, 886 and 887.)

(d) *Reece Patent of* 1893, *No.* 494,692. (Br., 79-81.)

Here again the "law of structure" and its violation are invoked and Carter accused of misinterpretation. It would seem that the expert and counsel for defendants are trying to befool the court and prevent it from believing ocular evidence. The Reece (No. 494,692) patent with clear and complete illustrations is in evidence. (Rec., Vol. III, p. 1196.) Defendants prepared an aluminum model which clearly and correctly exemplifies this

patent construction. Carter refers to the letters patent and the model, and had both before him while testifying (Rec., Vol. I, 367), was elaborately cross-examined and frankly stated exactly his views and any small differences in construction between this patent and the Wolhaupter devices. (Rec., Vol. I, pp. 389, 390.) Certainly this patent does show a tie plate with an upper channeled surface, side-rail abutting shoulders and lower tie-engaging projections parallel to the grain of the tie and with the middle lower projection underneath the central bearing. Whether or not the support of the rail base is above the plane of the plate or not is immaterial.

(e) *Hudson Patent No.* 142,020. (Br., 82.)

With all due respect to the learned Circuit Court of Appeals of the Seventh Circuit, it is submitted that this device shows every element of the broad combination asserted under the construction that is urged for the Wolhaupter letters patent, and it certainly does show defendants' tie-plate construction. It would be much more natural to make the defendants' tie plate out of this structure than out of any Wolhaupter device in the three Wolhaupter patents described. This Hudson patent was not called to the attention of Carter and was not introduced in evidence until after he had testified. It, however, needs no elucidation but speaks for itself. Issued August 19, 1873, it is placed at the joints of rails both as a joining and supporting medium; is totally distinct from the fish plates, joining the rails above; has upper-side abutting shoulders to prevent rail spreading, two rail-bearing surfaces separated by an intermediate channel extending clear across the plate; and a lower tie-engaging projection rectangular in section seated in the tie. It is true that the rail is described as having a projection which fits into the upper

channel or groove but to use a flat bottom *rail* would in no way involve structural change in the Hudson device. There is a suggestion that the rail projection or flange may be either vertical in shape or rectangular. It certainly does not take very great inventive genius to omit the rail flange and change the section of the lower tie-engaging projection from rectangular to triangular. Nor is the fact that bolts extend through the plate or joint and rail flanges any differentiation. Taking it exactly as it appears, the device presents all the aspects and discharges all the functions of a tie plate, is interposed between the rails and the tie has the features of side shoulders, channeled upper surface and lower tie-engaging projections. (Rec., Vol. III, 1079.) The fact that it is placed at rail intersections does not limit it to that place and it would not be invention to put this device under the rail on ties between their intersections.

(f) *Wilson Patent of* 1894, *No.* 522,867. (Br., 83-87.)

This patent it is claimed was disregarded by Carter. Carter had such a wealth of material that he is excused for not attempting to utilize all of it. According to his own testimony he selected simply what struck him as most pertinent. We will therefore as to it take the patent itself (Rec., Vol. III, p. 122) and the evidence of complainant's experts. Miller says (Rec., Vol. II, pp. 667, 668) that this tie plate is a double tie plate and when put together has a smooth upper surface and is impracticable. For these reasons he distinguishes from it the Wolhaupter letters patent. McElroy (Rec., Vol. II, p. 751) attempts an elaborate and technical distinction, saying it is not formed on the under side with devices more or less sharpened adapted to penetrate and engage the tie, does not have an additional flange above the plane of the rail and is not provided with rail-supporting surface

with transverse grooves and channels and a rail-abutting shoulder, and that the device is impractical. This patent is set out (Rec., Vol. III, pp. 1229, 1230.) The lower or base plate shows (1) rail-abutting upper-side shoulders; (2) longitudinal ribs on its upper surface under the rail base to prevent buckling of the plate under the weight of the rail and passing trains, consisting either of a series of narrow ribs of substantially equal width (Figs. 1, 3 and 4), or two narrow ribs at the sides and a broad central thickened portion (Figs. 5 and 6). (Rec., p. 1230, lines 27-44; Figs. 1, 2, 3 and 4.)

There are also two or three lower tie-engaging projections (Rec., Vol. III, p. 1229, Figs. 2, 7 and 8, and lines 55-59, p. 1230.) Thus the lower or base plate of this device performs the functions of a tie plate, is capable of use without any alteration whatever as a tie plate and exhibits all of the features broadly claimed for Wolhaupter's inventions. Expert testimony to explain or distinguish it is equally unnecessary. (See Supplemental Brief, pp. 52-54.)

(g) *Goldie Patent of* 1892, *No.* 485,030. (Br., 87-98.)

It is said that Carter and counsel considered this Goldie plate practically identical with defendants' plate. They do. There is no disagreement.

If the defendants' tie plate is practically the same as Goldie plate, it cannot infringe the Wolhaupter patent which issued three years after the Goldie patent. The cuts (Br., 88), claimed to show Wolhaupter, Goldie and defendants' devices, are inaccurate because the Wolhaupter section is shown as though the upper and lower flanges and grooves were crosswise of the tie, whereas they are not, as in the Goldie and defendants' plate, and also because representing the Goldie plate as a flat top

plate, when as described in the letters patent and as made and used, it had a depression on the upper surface extending across the plate and the tie as shown in defendants' tie plate. This cavity is not channeled out but is produced by bending down the center of the plate, but is a cavity nevertheless and left two rail-supporting side bearings. (Rec., Vol. III, p. 1140, Defendant's Exhibits "B" and "C"; Aluminum Exhibit "O-10"; Zimmerman, Vol. I, p. 529; Evans, Vol. I, p. 358; Ambler, Vol. I, pp. 542, 545; Goldie, Rec., Vol. II, pp. 806, 811; Schleiter, Vol. II, pp. 823, 826.) While it is suggested that this upper surface depression was intended and adapted to receive a rounded rail base, it is conceded by Goldie that even after a rail with a rounded base was placed on the plate there was still a space between the rail bottom and the bottom of the cavity (Rec., Vol. II, p. 807) and the patent drawings plainly show such a cavity. (Rec., Vol. II, p. 807; Vol. III, p. 1182.) It is insisted and McElroy testified, though how he could have received the information is not apparent, that the cavity in the Goldie patent drawings was doubtless much exaggerated to make it perfectly obvious and apparent. If so, the cavity must have been perfectly clear and was an exhibition and demonstration of that form of tie plate. It is next argued (Br., p. 95), and the cut is shown, that the Goldie tie plate as advertised by the manufacturers was a flat-top tie plate, but Goldie declared that the illustrations in circulars showed a plate substantially as in the patent drawings (Rec., Vol. II, p. 810) and while in the circular identified by Schleiter a flat-top Goldie plate is shown, the description in the circular is:

> "The Plate as now rolled has a rib on its upper side to hold the flange of the rail, thus preventing any SHEARING OFF OF THE SPIKE, and also relieving the neck from any wearing action.

It has on its under side two ribs with sharp edges, these enter the tie at right angles to its grain thus giving a secure grip on the tie and resisting, with the power of MANY SPIKES, ANY TENDENCY TO SPREAD. It is very slightly concave on its upper side under the center of the base of the rail and in an equal degree convex on the opposite side, and we have by exhaustive experiment and use demonstrated that it has LESS TENDENCY TO BUCKLE THAN ANY OTHER TIE PLATE NOW ON THE MARKET."

Comment is unnecessary. The cut (Br., 93) is a substantial reproduction of one of the patent drawings. Whether the patent drawings are made to scale or not, the patent drawings show and the specifications describe a tie plate, consisting of a piece of metal with an upper-rail abutting side shoulder, two rail-bearing surfaces separated by a cavity or depression and lower tie-engaging projections situated immediately beneath the upper surface rail bearings. (Rec., Vol. III, 1182, 1183.) Even if considered as a flat-top plate, all that is necessary to make it literally and exactly defendants' tie plate is to cut two grooves or channels across its upper surface and if treated as a tie plate with upper-surface rail bearings and a separating cavity all that is necessary is to gouge out the cavity instead of producing it by depression. Counsel may argue, experts may testify and tenuous distinctions may be attempted, but that is the result and it brings the case back to the fact that the Goldie device is substantially identical with defendants' device. It therefore is such an anticipation of the Wolhaupter claims if broadly construed as to invalidate them for want of invention and is an absolute demonstration of the lack of infringement. In the patent sense, if the defendants' tie plate is the Goldie tie plate it cannot be a Wolhaupter tie plate. There is nothing in the idea that the depression in the Goldie plate was minimized by wear or pressure of use so as to be scarcely noticeable. The

depression was shown in the patent drawings, and was in the article as made. The fact that Faulkner did not at first observe the depression is not material. It does not appear that he carefully inspected the plate after it was removed from the track, and when in the track of course the cavity and upper-surface rail bearings were concealed by the rail. Nor does it matter that the groove depression or channel in the Goldie patent was pressed out instead of being gouged out. Given a channel by depression it would not be invention to make it a channel by gouging or elimination.

(h) *Prior use of Goldie plates.* (Br., pp. 98-103.)

Then the abandoned experiment theory is invoked, but this is immaterial. The use of the Goldie device in the prior art is based upon (1) its description and illustration in letters patent issued in 1892 (Rec., Vol. III, p. 1182); (2) upon its description in prior publications (Rec., Vol. II, 810); and (3) upon its manufacture and actual use by railroads. That there was such prior use by railroads is beyond controversy. (Elliott, Vol. I, pp. 212, 246-268; Faulkner, Rec., Vol. I, pp. 276, 277; Dyer, Vol. I, pp. 433-446; Goldie, Vol. II, pp. 793-815; Schleiter, Rec., Vol. II, pp. 815-829.) The theory of abandoned experiment therefore fails. (*Troy Laundry Co.* v. *Columbia Mfg. Co.*, 217 Fed., 787, 789; *Toch* v. *Zikell Damp Resistance Pt. Co.*, 233 Fed., 993; *Aeolian Co.* v. *Wannamaker Co.*, 221 Fed., 666, 668.) But the railroad engineers evidently did not consider the Goldie rib or Glendon rib plate a failure. On the contrary the practical men thought it desirable. Elliott thought very highly of the Goldie plates (Vol. I, pp. 212, 250, 252), and considered them superior to the Wolhaupter. (Vol. I, p. 252.) Faulkner found Goldie rib tie plates in use on the Pennsylvania Railroad (Rec., Vol. I, p. 206.) Dyer

considered them satisfactory plates (Rec., Vol. I, p. 436) and certainly Exhibits "A" and "B" after from twelve to fourteen years of service were in pretty good shape. Goldie and his licensee after commending and introducing the Goldie or Glendon rib tie plate decided to go into the Goldie claw tie plate which differed chiefly, as patented, in having lower tie-engaging claws at corners instead of ribs underneath the plate and which is shown in the letters patent with the same upper surface cavity and bearings as the Goldie rib. (Rec., Vol. III, pp. 1265, 1268.) According to Goldie and Schleiter the Goldie claw plates were made only for experiment not for use with the upper surface cavity and bearings, but according to Zimmerman Goldie claw plates were rolled concave on top. (Rec., Vol. I, p. 534.)

Evans, connected with the Pittsburg & Lake Erie Railroad Company, says the Goldie claw plates were used on his road within a year or two of 1892 and had concave tops. (Rec., Vol. I, p. 538.) Ambler says that the Goldie claw plates were rolled with the cavity on the top, though comparatively speaking a small quantity considering the entire quantity rolled. (Rec., Vol. I, p. 544.) It is therefore evident that the top cavity as shown in the drawings of the two Goldie patents referred to were featured and used for a considerable time. The cavity was omitted subsequently for some reason not disclosed in the record.

(i) *Goldie's alleged adoption of Wolhaupter's ideas.* (Br., pp. 104-108.)

This argument is both irrelevant and unfounded in fact. Both of the Goldie letters patent No. 485,030, dated Oct. 25, 1892, and No. 540,356, dated June 4, 1895, the first of which long preceded, and the latter of which was practically contemporaneous with the first Wolhaupter patent, showed tie plates with top cavi-

ties or grooves, broad rail-bearing flanges, upper side rail-abutting shoulders and lower tie-engaging projections, and embodied the idea of these features separately and in combination, and if this was the "happy thought" that came to Wolhaupter are its source. The two cases cited (Br., 106 and 107), if Wolhaupter's devices are to be construed as broad inventions, make just as much for the theory that Wolhaupter got his ideas from Goldie as for the reverse theory. It is rather difficult to see how Goldie could get the idea of upper-side shoulder, top cavity and rail bearings and lower tie-engaging projections from a Wolhaupter device issued three years after the Goldie patent.

The chart (Br., 105) in spite of some misleading features, makes for the Goldie tie plate as suggesting the idea now claimed to belong to Wolhaupter. Goldie had the idea of upper rail-abutting flanges and lower tie-engaging projections in letters patent No. 426,530, dated April 29, 1890 (Rec., Vol. III, p. 1140); in letters patent No. 457,584, dated August 11, 1891 (Rec., Vol. III, p. 1145), and in letters patent No. 457,585, dated August 11, 1891 (Rec., Vol. III, p. 1149), and in letters patent No. 485,030, dated Oct. 25, 1892, added the concave upper surface to the rail-abutting upper flange and lower tie-engaging projections (Rec., Vol. III, p. 1182.) The Goldie patent No. 540,356, dated June 4, 1895 (Rec., Vol. III, p. 1265) shows the same kind of a cavity. In all these Goldie devices the tie intersections and upper shoulders were parallel to the rail and crosswise of the tie. In the Wolhaupter devices the tie-lengthwise flange was adopted, and appeared in Goldie's subsequent patents. This, if any suggestion is to be attributed to Goldie from Wolhaupter, simply shows that Goldie had changed the direction on his flanges and cavities and nothing else. The argument is too far-fetched to be of much value and is just as applicable one way as the other.

(j) *Wells patent No.* 203,570 *of* 1878. (Br., 108-120.)

The Wells patent is so clear in its specifications and illustrations (Rec., Vol. III, p. 1088), has been so illustrated by models (Aluminum Models, Exhibits O-5 and O-6), so carefully analyzed by Carter (Rec., Vol. I, pp. 348-352) and is so pertinent as an anticipatory device embodying all three of the elements claimed broadly for the Wolhaupter patents that but little need be said to the elaborate attempt made to discredit and distinguish the device. This device performs the combined functions of a rail chair, rail joint and tie plate. As shown, it extends over about four ties and while between two of these ties it is a rail joint, on all of the four ties it acts a rail chair and a tie plate. It has upper-side shoulders against which the rail flanges impinge, a doubly-channelled rail-supporting surface with three rail-bearing flanges and a lower tie-engaging projection. Tie plates are made by rolling long bars and cutting them up into six or eight-inch sections. It certainly makes no change in the function or style of operation of the Wells device to cut it up into such sections and when so cut the evidence is that each section would make a good tie plate without any change whatever. Faulkner (Rec., Vol. I, pp. 301 and 302), Storey (Rec., I, pp. 317 and 318), Carter. (Rec., Vol. I., 351.) Of course, neither Miller nor McElroy could see any utility or anticipation in this device. The Wells patent shows the union of rail-abutting side shoulders, rail-bearing flanges, cavities or grooves and lower tie-engaging projections, all in practically the same relations and performing the same functions as to elimination of water and sand, track alignment, and tie protection, as the defendants' tie plate (*Troy Co.* v. *Columbia Co.*, 217 Fed., 787, 792-3.) It is submitted that

the "law of structure" (*Clough* v. *Barker*, 106 U. S., 166) here applies. The purpose of the Wells structure was to keep the rails in alignment, provide upper rail bearings for rail support, intermediate channels to prevent wear and eliminate foreign substances, and lower tie-engaging projections to prevent movement on the tie. These are the exact purposes of tie plates. A patentee, even if he does not perceive all the functions or uses of his device, is entitled to all that ordinarily follow. (*O'Brien-Worthen Co.* v. *Sempel*, 209 Fed., 847, 852; *Stearns & Co.* v. *Russell*, 85 Fed., 218, 226.) It matters not that this device is called a railway chair. It is a tie plate. If there is anything in the distinction urged by counsel between a rail chair, rail joint and tie plate, because, in the former the device and rail are fastened together and in the latter the rail is free to move on the plate, this distinction fails here for the rail is not fastened to the chair nor wedged into the chair, but is free to play vertically.

The cut (Br., 115) simply serves to point the moral with more detail. The Wells device can be superimposed upon defendants' tie plate with every element therein in the same relative position and performing the same functions.

No objection can be made to this device, in six-inch sections for lack of strength. Having urged lack of strength in the Dunham device as an insuperable differentiation from Wolhaupter's devices, the superior strength of the Wells device is now urged for the same purpose. (Br., 117.) The interpretation given to this patent in the Seventh Circuit is urged as eliminating its consideration, but in the Sixth Circuit opinion, it is said:

> "The use of an upward-extending flange on one or both sides of tie plates to restrain the rail and re-

ceive its lateral thrust was so common prior to 1895 that a citation of earlier patents to show such element is unnecessary. The use of grooves or channels on the upper surface of his plate to serve as a receptable for sand, grit and other hurtful substances, and to facilitate their removal and the evaporation of moisture had been expressly mentioned in the patents of Wells, No. 203,570, 1878, and Dockstader, No. 462,392, 1891, and are seen transversely of the rail in that of Wilson, No. 522,867, 1894."

And again:

"As the grooves in the Wells patent are parallel with the rail and in the line of suction caused by the passing trains, they ought, it would seem, to be more effective in freeing the plate or chair of foreign substances than the grooves transverse to the rail shown in Wolhaupter's first and second patents." (Original Br., Exhibit III, p. 114.)

We forbear further comment except to say that the prophetic argument (Br., 120) is just as applicable from the basis of the Wells patent to the Wolhaupter patents as from the Wolhaupter devices to the defendants' plate, and much more applicable to defendants' tie plate considered in connection with Wells.

(k) *Wolhaupter patent of* 1897, *No.* 579,509. (Br., 121.)

This patent has been discussed sufficiently to show the erroneous character of the statements and arguments made. (Original Br., pp. 66, 67.) It is, however, proper to call the attention of the court to the fact that the drawings and specifications of this Wolhaupter patent No. 579,509 (Rec., Vol. III, p. 1294) do show, beyond any question of doubt or argument, a railway tie plate with an upper rail-abutting side flange, upper bearing surfaces separated by an intermediate cavity or groove under the rail bottom, and lower tie-engaging projections which enter the rail parallel to the grain at right angles to the tie and, while showing all of these features, does

not claim them, either separately or even jointly, except in combination with stamped-out lower tie-engaging projections. It is a complete admission that the subsequent Wolhaupter patents could not broadly claim such elements in combinations of any kind. (Carter, Rec., Vol. I, pp. 375-377.)

(l) *Gould patent No.* 280,030 *of* 1883.

Again comes the accusation of attempted deceit in our discussion of this patent. A complete and accurate statement was made (Original Br., 44-46), starting with the assertion that the model was the base or tie plate part of a railroad rail cushion and joint and was used with additional devices. But this base or tie plate part was entirely separate, and, as the form shows, absolutely independent of the other portions or the heads on the bottom of the rail. This base plate shows the upper rail-abutting shoulder, three rail-bearing surfaces, two grooves underneath the rail bottom and lower tie-engaging projections, all parallel to the rail. As it stands it is a practical tie plate without alteration and it was intended to be used as a tie plate. (Rec., Vol. III, pp. 1098-1100; Aluminum Model, Exhibit O-20.)

(m) *Holmes patent of* 1894, *No.* 514,465. (Br., 123.)

This patent is discussed in the Original Brief, pp. 50 and 51. It is claimed that this discussion is misleading and unfair. It could not be so, because the cut (Original Br., p. 50) is an exact reproduction of Fig. 1 of the patent drawings, a reference is given to the exact page where the patent specifications are set forth and it is fully described. It is stated that the entire device is a double plate and that the figure simply shows the lower plate and that it has, and this is shown beyond dispute, rail-abutting side flanges, upper surface pockets and rail-

bearing flanges and lower tie-engaging flanges parallel to the grain of the tie. This lower or base part can be put on a tie and under a rail and used as a practical tie plate without the slightest alteration and it can make no difference that there was shown an upper intermediate plate between it and the rail.

(n) *Prior printed publication.* (Br., 124-129.)

This discussion, so far as Exhibit DDD (see prior Br., p. 53, Aluminum Model, Exhibit O-24, and Railway Gazette (Rec., Vol. I, pp. 513, 515) drawings (Rec., Vol. II, pp. 961, 962) is concerned, is confined to the interesting question of whether dotted lines in a section of a device mean pockets or cavities or grooves extending clear through. The experts differ. Carter says they do, McElroy, Miller and Wallace say they do not. But what difference can it make? It is clear that the upper surface was to be channelled or excavated and this would lighten the plate, conserve its strength and leave narrow rail-bearing surfaces. It certainly would not be deemed invention, if cavities or pockets not extending the length of the plate were described, to extend these clear across the plate. Even if it were conceded that the dotted lines meant to only pockets or cavities, there is nothing to show whether the pockets were long or short or whether the metal left at each end was a fraction of an inch or an inch in thickness. This tie plate is practically identical with defendants' tie plate. The illustrated article was published in the Railway Gazette, September 30, 1887. That there is an upper rail-abutting shoulder, rail-supporting bearings with hollow cavities or grooves underneath the rail base and lower tie-engaging projections immediately beneath the bearings is beyond question. Counsel's own illustrations show this (Rec., Vol. II, p. 1075, opposite p. 694; Br., Figs. 1 and 3, p. 126.) Nor is counsel helped by his alleged accurate translation of the article in

the Railway Gazette. Even according to this revised translation a certain amount of weight, can be saved by means of weight-saving cavities shown by a, a, Fig. 9. Here is the idea of weight saving by cavities. There is certainly nothing in the German as translated by counsel which limits the length of the cavities. They can just as well be transverse grooves as transverse pockets. But we are not concerned with the German text. It was the translation or transcription in the Railway Gazette that was offered in evidence. And here it is said:

> "The groove shown in the upper surface was apparently to lighten the plate, being taken out at a point where the metal was not needed."

(o) *Defendants' Exhibits LLL and KKK.* (Br., 129-130.)

Here quibbles are indulged in to eliminate these devices as anticipatory and the attempted distinction is made between pockets and grooves. This subject has been already discussed. (Original Br., 54-57.) The draftsman was given the descriptions and reproduced the drawings shown as exhibits, Gaylord (Rec., Vol. I, pp. 513, 525) drawings (Rec., Vol. III, pp. 964 and 965).

IX.

Alleged Error of the Sixth Circuit Court in Interpreting the Claims.

(Brief, pp. 131-144.)

(a) *Patent No.* 538,809. (Brief, pp. 131-138.)

The opinion of the Sixth Circuit Court of Appeals (*Railroad Supply Co.* v. *Elyria Iron & Steel Co.*, 213 Fed., 789; Original Brief, Ex. I, II, III, p. 105-118) is so clear as to need no defense. But it is proper to call attention to some of sophistries in the attack. The Wolhaupter patent, No. 538,809, has already been discussed (Original Brief, pp. 18, 26; Supplemental Brief, p. 35)

and the rules of patent construction set out. (Original Brief, 84-85.)

This patent is also set out in the record (Rec., Vol. I, pp. 11-14) and was fully discussed by defendants' expert. (Rec., Vol. I, pp. 345-348.) Even on the theory that the specification contemplates both a stepped construction, enabling a new seat in the tie after some use, and the combination of upper rail-bearing flanges with lower tie-engaging flanges, the whole theory is for flanges parallel to the grain of the tie and a tie plate of trussed construction, and not for a flat tie plate with channeled and ridged rail-bearing upper surface. Perusal of the specifications shows that the real idea and the one which was claimed as invention was a stepped construction, and if the broad construction necessary to find infringement in defendants' tie plate is given to Claim 8, it is absolutely void under the prior art, and there has been no disclaimer. Taking into consideration the state of the art at the time this patent issued the fact is, that in this matter form is of the essence (*Weir* v. *Morden*, 125 U. S., 98; *Railroad Co.* v. *Kearney*, 158 U. S., 461, 469; *Crawford* v. *Heysinger*, 123 U. S., 589) and from the fact that the claim closes with the words "Substantially as described," it follows that any invention must be by construction limited substantially to the form described. *Brown* v. *Davis*, 116 U. S., 237, 251; *Pope Mfg. Co.* v. *Gormully & Jeffery Mfg. Co.*, 144 U. S., 248, 253; *Singer Mfg. Co.* v. *Cramer*, 192 U. S., 265, 284, 285; *Jeffery Mfg. Co.* v. *Independent Elec. Co.*, 83 Fed., 191; *Stearns* v. *Russell*, 85 Fed., 218; *Stirrat* v. *Excelsior Mfg. Co.*, 61 Fed., 981, 985; *Sutter* v. *Robinson*, 119 U. S., 530, 541; *Gates Iron Works* v. *Fraser*, 55 Fed., 409, 411.) It must be noted also that the patentee declares his invention to consist in a combination of the devices and appliances thereinafter described and claimed. (Rec., Vol. I, p. 12, lines 60-65.) Variations

are described and it is said that the under flanges may be divided, or instead of flanges mere projections may be used and the plate instead of having its ends beveled may be square and the under flanges alone be stepped; or but a single end of the plate need be stepped; or the flanges having one or more of their ends stepped might be applied to a flat plate or to the numerous other constructions of plates on the market. (Rec., Vol. I, p. 14, lines 2-11.)

The so-called first feature of the invention is just as specifically described and restricted as the alleged second feature. Whether or not a patentee may in terms have two claims identical in scope and meaning is not in question. Sometimes this occurs and the duplicate claim is void. The question is whether, under a most definite, limited and restricted construction necessitated by the showing of the state of the prior art, a patentee can have a claim broader than his invention. Certainly not because other claims are narrow. *The Bresnahan* v. *Tripp, etc., Co.*, 102 Fed., 899, rule is simply a prima facie construction rule, not applicable when both the terms of the specification and the condition of the prior art show a restricted or limited, if any, invention. What occurred in the patent office or what the situation was there, is not shown in this record, but we must conclude that the words "substantially as described" were required. The rule as announced in *Winans* v. *Denmead*, 15 How., 329, by no means makes for the construction claimed, but under its very terms Wolhaupter is limited to the particular form set out with the variations suggested in the specifications, and under the state of art and the specifications of the patent, Claim 8 cannot be fairly construed otherwise than narrowly. If a broad construction is to be given, it is void. (*Stirrat* v. *Manufacturing Co.*, 61 Fed., 981, 984, and cases cited.) All that follows (Brief, 136-138) is on

the assumption that Wolhaupter not only invented something that was patentable, but that he invented the broad idea of channeled upper surfaces and lower tie-engaging projections in tie plates. Under the cases cited (Br., 136) no such broad construction can be given without invalidating the claim.

(b) *Wolhaupter Patent No.* 691,332. (Br., 138-142.)

As to the Goldie patent cited in this discussion, it is beyond question that the Goldie tie plate is in form practically identical with that of defendants and that it does have a grooved top. It cannot be consistently said that Goldie had no thought in his mind that would lead by mere mechanical improvement to the defendants' tie plate, but that Wolhaupter did. The reverse is exactly true. Goldie had the idea of upper rail-abutting side shoulder, side bearings with an intervening cavity or groove to support the rail bottom and lower tie-engaging projections immediately underneath and parallel to such rail bearings. (Rec., Vol. III, p. 1182.) The argument differentiating the Wolhaupter device from the Goldie, differentiates defendants' tie plate from the Wolhaupter devices. Counsel can take their choice between invalidity of Claim 8 broadly considered and noninfringement by defendants' device. It is submitted that the court did not, in considering the Reece and Holmes patents, aggregate the two, but analyzed each and found each anticipatory of the second Wolhaupter patent (Vol. III, p. 1196) (Original Br., Ex. III, 117) and correctly describes the dominant purpose of the second Wolhaupter patent. (Vol. I, pp. 16-17. (Original Br., Ex. III, 111.) It must be kept in mind also that no one of the forms described or shown in either the first or second or third Wolhaupter patents was ever manufactured and that the variant forms buckled, broke, destroyed the tie and did not keep the rails in alignment. (Original Br., 72-79.)

The so-called "Law of Structure" is again invoked (Br., 140), but is dangerous for counsel, because if the Law of Structure eliminates the references as anticipatory of the second Wolhaupter patent, it eliminates defendants' tie plate as an infringement. Moreover, the first Wolhaupter patent emphasizes the placing of the lower flanges parallel to the upper, but not in the same vertical planes, whereas the second Wolhaupter patent eulogizes vertical alignment of upper and lower flanges as preventing buckling. The three elements of upper rail-abutting shoulder, channeled, corrugated or flanged upper rail-supporting surface and lower tie-engaging projections had already, irrespective of other references, been fully shown without including in the combination claim the side shoulder in the two prior Wolhaupter patents. (Vol. I, pp., 11-17; Vol. III, 1294.) It is suggested that whether Wolhaupter's invention was great or small, it is entitled to protection, but there can be no invention where it, the device, is not only shown by the prior art, but has been shown and abandoned by the patentee in prior applications. *Keystone Bridge Co.* v. *Phoenix Iron Co.*, 95 U. S., 274, 278; *McCarty* v. *Lehigh Valley R. Co.*, 160 U. S., 110. (Original Brief, 66-88.) Again there is an effort to have the claims construed under the broadest interpretation that can be given to the language without regard to the state of the art or the prior acts of the patentee.

(c) *Patent No.* 721,644. (Brief, pp. 142-144.)

The same suggestions may be made on this criticism. Not only did the court (Original Br., Ex. III, 112, 118) find the combination of the shoulder and upper rail-bearing flanges in the Wells patent No. 203,570 (Rec., III, 1088) and the Goldie patent No. 485,030 (Rec., III, 1182), but also unclaimed in the Wolhaupter second patent No.

691,332 (Vol. I, 15-17) and it might with perfect propriety have added also in the first Wolhaupter patent No. 538,809 (Rec., Vol. I, 11-13) and Wolhaupter No. 579,509 (Vol. III, p. 1294.) The analysis of the third Wolhaupter patent given by the court is fair. (Rec., Vol. I, pp. 18-21.) (Original Br., Ex., 111, 112.) The combination in the third Wolhaupter patent is obvious and was not novel, and the Sixth Circuit did not pick out but one element, the shoulder, but both shoulder and upper surface grooves and flanges, and found them in prior combinations and referred to (Original Br., Ex. III, 118) Wolhaupter No. 691,037 (Rec., Vol. III, 1354), and added Hart No. 696,964 (Rec., Vol. III, p. 1367) and Sellers No. 684,466. (Rec., III, p. 1350.)

X.

Infringement.

(Br., 145-154.)

(a) *Defendants' plate.*

Having supposedly established the validity of all three Wolhaupter patents and the construction of their claims in the broadest way, of course the argument for infringement is comparatively easy, especially as it is inaugurated by the comparison of the alleged "complainant's tie plate" (Complainant's Ex. 14) with the "defendant's tie plate." It has already been shown (Original Br., 81-84) (*supra,* 28), that the so-called "complainant's tie plate" (Ex. 14) (Rec., Vol. I, 41) is not complainant's tie plate, either in the sense that it was gotten up by Wolhaupter, that it is a legitimate derivative from Wolhaupter or was made by complainant until after it was gotten up by Storey. It was never manufactured commercially by the Supply Company until after the commencement of this suit.

But even if the designated claims in any of the Wolhaupter patents are construed as meaning anything except the specific devices therein set out, no one of the claims can be held to cover the defendants' tie plate. (Original Br., pp. 80-87; Supplementary Br., 51-68.) There is no presumption of infringement, but the burden of proof is always on the plaintiff; all of the Wolhaupter devices showed the upper flanges and lower flanges parallel to the grain of the tie and at right angles to the rail, except the upper flanges in one of the late constructions (Fig. 6 and 7; Rec., Vol. I, p. 19); and all are trussed or built-up and not flat plates. A plate that has side shoulders, upper flanges and lower tie-engaging flanges parallel to the rail and is simply a flat plate channeled on top, cannot be an infringement. A comparison of the Wolhaupter devices with defendants' tie plate is the best evidence that there is no infringement on the necessarily narrow construction demanded to sustain the validity of each of the Wolhaupter claims. In addition to the cases cited see: *Windsor Glass Mach. Co.* v. *Brookville Glass & Tile Co.*, 229 Fed., 833, 836; *Leader Plow Co.* v. *Bridgewater Co.*, 237 Fed., 376, 379.

(b) *First Wolhaupter patent.*

Comparison of the cross section (Brief, 147) of the Wolhaupter patent No. 538,809 with Ex. "D" on the opposite page, keeping in mind that the Wolhaupter upper and lower flanges and upper channels are parallel to the tie and at right angles to the rail and the lower flanges are in the vertical plane, not of the upper flanges, but of the upper grooves, and that the Wolhaupter patent is for a built-up or trussed construction, refutes the claim of infringement. Here the argument, after insisting upon the most rigid construction of the prior patents and most tenuous distinctions of these prior patents from the Wolhaupter now insists that it matters not how top flanges are formed or how under tie-engaging projections are

shaped, or where they are situated, or how they act, or what their direction is as to the tie and rail.

(c) *Infringement of second Wolhaupter Patent.* (Brief, 149-150.)

The same may be said as to this argument. The Wolhaupter claims, if valid, can be sustained only for their exact construction, and cannot, properly construed, include defendants' device. A comparison of the devices described and shown in this Wolhaupter patent (Rec., Vol. I, p. 15) with defendants' tie plate (Rec., Vol. I, p. 22) (Brief, p. 146) is the best refutation of the claim of infringement. Neither in appearance, action or construction are the two devices similar, under proper limitations of the Wolhaupter claims.

(d) *Infringement of third Wolhaupter Patent.* (Br., 150-151.)

The claims in this patent are so manifestly invalid, even as restrictedly set out, on account of the showing of the prior art and of the same devices unclaimed in the prior Wolhaupter patents, that discussion of the question of infringement is unnecessary. But it is but right to call attention to the fact that the evidence of Carter, ~~defendants'~~ expert, is not susceptible of the construction given. (Brief, p. 151.) On the contrary, he insisted that any validity in any Wolhaupter claim, which he denied *in toto,* necessarily excluded defendants' device as infringing. (P. R., Vol. I, p. 362, 364, 368, 369, 379.)

(e) *Conjoint use.* (Brief, 151-152.)

Just how conjoint use could be made of all of the devices embodied in a single plate under the different specifications which show (1) upper surface flanges and grooves with lower tie-engaging projections between the

upper flanges and underneath the grooves, and omitting the side shoulders; (2) a device with both upper flanges and grooves and lower tie-engaging projections parallel to the tie with lower tie-engaging projections not underneath the upper grooves, but underneath the upper flanges and (3) a device showing upper flanges and grooves either parallel to the tie or crosswise of it and a lower tie-engaging projection which may not be in the same vertical plane as either groove or flange is a problem.

The argument and authorities next cited (Br., p. 152) relating to each claim covering a complete invention and not limiting claims except by their terminology or by strict construction require no special answer. Again comes the plea for a liberal interpretation. The rule is a fair construction justified by the state of the art, the specifications themselves and the evidence in the case. The proposition with which this argument is closed is the exact reverse of the contention of defendants. Defendants insist that if these Wolhaupter claims have any validity they are not infringed.

XI.

Aggregation.

(Br., pp. 154-158.)

How treated in the courts below. (154-155.) The Sixth Circuit Court of Appeals did not consider this phase of the case because there was no necessity of it irrespective of this defense that the court had held both non-validity and non-infringement. The Circuit Court of the Seventh Circuit did consider and overrule this defense. In so doing it is submitted that it not only failed to apply the decisions of this court (Original Br., pp. 28-29) and numerous decisions of lower courts, but formulated an opinion in direct variance from a num-

ber of its own decisions. (See: *Alexander* v. *DeMoulin Bros. & Co.*, 199 Fed., 145, 147; *Ryan Car Co.* v. *Live Poultry Transp. Co.*, 195 Fed., 525.) We would also direct attention to recent applications in lower courts of this principle of aggregation. *Adrian Wire Fence Co.* v. *United Fence Co.*, 223 Fed., 342, 345; *Star Hame Mfg. Co.* v. *U. S. Hame Co.*, 227 Fed., 876, 883; *Keene* v. *New Idea Spreader Co.*, 231 Fed., 701, 710; *Apple* v. *Am. Shoe Mach. & Tool Co.*, 232 Fed., 603, 606; *E. E. Johnson Co.* v. *Grinnell Wash. Mach. Co.*, 231 Fed., 988, 994; also to the fact that defendants' expert Carter both asserted and explained that the elements of upper side shoulder, upper rail bearings and corrugations, and lower tie-engaging projections did not in any way co-operate or combine in action, but each performed its independent function, whether united with one or both of the others and performed it in the same way (Carter, Vol. I, pp. 347, 348), and complainant's expert McElroy (Rec., Vol. I, 70-73), and Wolhaupter himself corroborated this view. (Rec., Vol. I, 187-192.) It is refreshing to note, however, that having argued (Br., 149-150) defendants' tie plate to infringe not only claims one and two but also claim 3 of the second Wolhaupter patent, it is asserted (Br., 158) that Wolhaupter does not have any one patent claim covering the whole of defendants' tie plate.

XII.

Unsubstantiated Assertions.

(a) *Assertions as to commercial forms.*

The burden of proof was on the plaintiff to show what commercial forms of the Wolhaupter patented devices were used or what commercial forms of the alleged Wolhaupter tie plates were manufactured. The subject was fully discussed (Original Br., pp. 74-75; Supplementary

Br., p. 68.) It was admitted by Hawley and Bell that the forms of the Harriman plate were not made until late in 1904. It was also stated by Faulkner (Vol. I, p. 220) that no devices of the form shown in the Wolhaupter patents were ever seen by him. But the most conclusive evidence on this subject is supplied by the chart prepared by Bell and reproduced in the brief. (Ex. 56; Rec., Vol. I, p. 199 between pages 114 and 115, and Br., p. 39.) This shows the Wolhaupter plate from 1895 to 1904 to have been made without a side shoulder and that the commercial forms called Wolhaupter never reproduced the patented forms is evidenced by the catalogues of the Supply Company. (Vol. II, pp. 905-933.) Not one of the officials, employes, experts or railroad men called by the Supply Company testified to any commercial use of the Wolhaupter patented forms. Every assertion made in our former briefs is substantiated by a direct reference to the record. Such nonuse is extremely valuable as a limitation on broad construction. *Auto Piano Co.* v. *Amphion Piano Player Co.*, 186 Fed., 159. It is again, therefore, asserted that no commercial use was ever made of the Wolhaupter devices as shown in the patents; that the railroad engineers of the Santa Fe and Southern Pacific lines got up what is known as the Harriman plate; that Wolhaupter is opposed to such forms; that the Story plate was the result of the engineering and practical experience of Faulkner and Story; and that the large output of the Supply Company was due to the increased demand for tie plates, extensive exploitation, solicitation and demand, departure from the patented forms of Wolhaupter and adoption of practical forms suggested by railroad engineers.

The only attempt to impeach the statements made in the original and supplementary briefs on this subject is a denial by counsel. It will also be noted that the cross

sections of the Wolhaupter patent and commercial Wolhaupter form (Br., pp. 161-163) show no upper shoulders or stepped construction and confirm the accuracy of the position of defendants. It is evident, therefore, that the Wolhaupter plate both as described and made was not a commercial success.

(b) *Utility.* (Br., pp. 162-169.)

Nor is it true that the Wolhaupter tie plate in the forms manufactured met with universal recommendation or adoption. It was condemned by many railroads and many absolutely refused to put it in track. (Original Br., pp. 72, 79; Supplementary Br., p. 68.) The combined testimony of witnesses interrogated both for the Supply Company and the defendants is that the Wolhaupter plate as made was a dismal failure. (See references to record, Original Br., pp. 75-78.)

But even if the Wolhaupter plate had been made exactly as described in the patents and had been a complete commercial success, such fact would not be decisive or material where the prior art shows so clearly lack of patentable invention and anticipation. It is only when these questions are doubtful that such commercial success plainly based on *the invention itself* and not *superiority of manufacture or sales methods* has gone into universal use is material. (Original Br., pp. 78-79.) Attention is also called to this rule and its limited influence as laid down in the following cases:

Star Hame Mfg. Co. v. *U. S. Hame Co.*, 227 Fed., 876, 883.

Apple v. *Am. Shoe Mach. & Tool Co.*, 232 Fed., 603.

Rauch & Lang Carriage Co. v. *Hanlon*, 233 Fed., 673, 675-6.

Johnson v. *Lambert*, 234 Fed., 886, 890.

In reply to the continued argument on utility (Br., pp. 163-169) little additional need be adduced. The subject has already been discussed (Original Br., 72-78, Supplementary Br., 68-74.) It is evident that throughout this discussion it is assumed that both the Harriman and Storey plates are properly styled "Wolhaupter" plates. The earlier type or pattern of Wolhaupter tie plate was unsatisfactory and it was not until these plates were still farther removed from the patented devices that any popularity at all obtained. At any rate, there are many important railroad lines on which Wolhaupter plates in any sense of the term have not been and are not used, and there are other lines on which it has been abandoned or discarded after test and unsatisfactory evidence. It was the unsatisfactory service of the Wolhaupter and other plates in 1904 that led to the devising and adoption by the Santa Fe and Southern Pacific Lines of the flat-bottomed, top surface corrugated and upper side shoulder plates. Faulkner (Rec., Vol. I, 232-239) and Storey (Rec., Vol. I, 312.) These are not even styled by complainant's catalogues or witnesses as Wolhaupter plates and to so name them is to beg the entire question of this litigation. The percentages of Bell are unreliable because he does not define what the so-called Wolhaupter type of plates in his statistics signify, though undoubtedly he employes it as including both the Harriman and Storey plates. The evidence of Thompson makes it plain that the first commercial Wolhaupter tie plate is no longer used except where ties have not been renewed or rails not changed. (Rec., Vol. I, pp. 593, 594, 603, 604, 605) and that the later so-called Wolhaupters are either "flat-bottomed Wolhaupter" (Harriman) plates, or "ribbed Wolhaupter" (Storey) tie plates. The photographs appended to the testimony of this witness show little as to the form of

plate. This witness swore that no old Wolhaupter plates have been put on the Santa Fe tracks since 1903. As to the testimony of Comerford concerning the use of the Wolhaupter plates on different roads, attention is called to the fact that the Geneva and Aurora branch of the Chicago & Northwestern is only about ten miles in length (Rec., Vol. II, p. 590) and that the photographs taken at Huntley on the Rockford branch of that road, and the Wolhaupter tie plates at Janesville on the same line are interspersed with Sellers' plates.

The accusation that the statements in the original brief (p. 75) are dehors the record is refuted by references to the record contained on that page. Evidently the sales of Buck (Rec., Vol. II, pp. 621, 626) of so-called Wolhaupter plates in 1908 were not satisfactory because a few months before the testimony of the witness was taken (May 25, 1910) the Supply Company was not successful in getting the business of the Baltimore & Ohio R. R., and the Elyria Iron & Steel Company did so. (Rec., Vol. II, p. 626, Vol. I, 489.) The standard plate on the Baltimore & Ohio is not a Wolhaupter plate. (Rec., Vol. I, p. 516.) Some Wolhaupter plates are used along with Goldie, Sellers, McKey, Glendon and Economy. (Rec., Vol. I, p. 516.) The New York Central Lines may use Wolhaupter plates to some extent but by no means exclusively. This system gets its plates also from Elyria Iron & Steel Company (Rec., Vol. I, pp. 489, 490, Vol. III, pp. 1009-1051). On the record it is shown by undisputed testimony that the Wolhaupter tie plates have been abandoned and discarded both as standard and in use by a number of railroads and since the devising of the Harriman and Storey plates have been practically given up as unsuccessful.

(c) *Comparatively small number of Wolhaupter plates made about twelve years ago.* (Br., 170.)

This statement (Supplementary Br., pp. 7 and 70) is challenged as an erroneous and misleading statement. To begin with Bell says there had been modifications in the Wolhaupter type of plate made in 1895 (Rec., Vol. I, p. 127) and the statistics given by Bell show the early manufacture of the Wolhaupter tie plates must have been small because the tie plates of this form in 1895 numbered only 302,261; in 1896, 108,784; in 1897, 2,817,259; in 1898, 7,617,613; in 1899, 18,521,996; in 1900, 6,255,755. But it must be recalled that these statistics do not relate alone to Wolhaupter plates but include the Q. & W., as well as the Wolhaupter, which are both plates with flanges and grooves on the upper surface. (Rec., Vol. I, table on page numbered 87 opposite Rec., p. 56, and Vol. II, pp. 909, 913 and 915.) It is interesting in this connection to notice under the sales map (Rec., Vol. I, page numbered 181 opposite page 183) of the record what a tremendous boost was given by the manufacture of the Harriman plate in 1905 and 1906.

(d) *Claim that the defendants' tie plate was originated by W. F. Storey.*

This subject has already been discussed (*supra,* 28, and Original Br., pp. 81-84) where references are made to the record pages of the evidence. Wolhaupter declares that he devised the corrugated top and bottom rib plates shown as Exhibits 13 and 18 (Rec., Vol. I, 41, 91) and the corrugated top flat-bottom plate shown as Exhibit 13 (Rec., Vol. I, page numbered 63 opposite Rec., page 42) early in May, 1904 (Rec., Vol. I, pp. 170, 171), but does not say he originated the ideas or deny their origin elsewhere. No commercial plate of either form was then rolled but he says he believes (Rec., Vol. I, 170) aluminum models of Exhibit 18 were delivered to the Santa Fe and the Railroad Supply Company.

Faulkner's investigation of the tie plate question on the Santa Fe System was begun in February, 1904 (Rec., Vol. I, p. 201) and his report was dated April 20, 1904. (Rec., Vol. I, p. 232.) In this report he speaks of a tie plate with upper side shoulder, rail-bearing flanges and grooves and discusses the relative merits of a plate of this kind with a flat-bottomed or ribbed bottom. (Rec., Vol. I, pp. 232-239.) Faulkner says that none of the suggestions came from Wolhaupter. (Rec., Vol. I, p. 283.) He submitted a blue print within a few days after the date of his report which is shown as Exhibit I and recommended this plate, but it was not adopted. (Rec., Vol. I, p. 279.) Storey knew of this report, and afterwards, while in 1908 designing the Storey plate, received suggestions from Faulkner (Rec., Vol. I, 315-16, 322), but none from anyone connected with the Supply Co. (Rec., Vol. I, 315.) Storey in his work in 1908 had the old Sacramento plate in mind (Rec., Vol. I, 323), and has always considered upper surface channelling in tie plates functionally unimportant, but desirable for lightness. (Rec., Vol. I, 318.) (Rec., Vol. I, p. 312.) The plate, Exhibit I, designed by Faulkner and dated May 5, 1904, had a flat top. The blue print Deft's. Ex. J, showing a flat channelled surface shoulder plate with flat bottom (Rec., Vol. I, 217) is dated June 28, 1904, and is signed by Dunn, the chief engineer of the Atchison, Topeka & Santa Fe R. R., now deceased. (Rec., Vol. I, 313.)

In September, 1904, John Dove Isaacs and John H. Wallace, Southern Pacific Engineers, at the suggestion of Julius Kruttschmitt, General Manager, got up the Harriman plate. (Rec., Vol. I, pp. 451, 452; Vol. II, pp. 553-584.) This is the so-called Harriman plate. (Rec., Vol. I, p. 456.) Isaacs and Wallace got this plate up without suggestions from anybody else. (Rec., Vol. I, p.

453, Vol. II, p. 575.) The Harriman plate is simply the old Sacramento plate with channels across the top. (Rec., Vol. I, pp. 451-453; Vol. II, pp. 555, 556.) It was nine months after this (Br., p. 174) that blue prints were of the Harriman plate were prepared for the Southern Pacific Railroad. Faulkner first saw the blue prints of the Supply Co. showing the Harriman plate at its office in 1906 or 1907. (Rec., Vol. I, 277, 278.) The license agreement is dated June 11, 1908 (Rec., Vol. II, p. 876), and in the meantime the Harriman plates were being rolled at the Laramie Mills of the Southern Pacific System. (Rec., Vol. I, p. 457.) Wolhaupter has absolutely nothing by which he fixes the date either of the drawing shown as Exhibit No. 13 or the model Complainant's Exhibit No. 18, and Bell's testimony on this subject is simply guesswork. (Rec., Vol. I, pp. 90, 91.) He says he has no actual knowledge on these matters. (Rec., Vol. I, p. 91.) Storey discussed a plate substantially like the Harriman plate with Bell and then first learned, after he had the idea himself, of a similar plate. Prior to the interview with Bell, he had not seen a tie plate of this kind or a sketch of them, or had any suggestions from Bell or a representative of the Southern Pacific Railroad or the Railroad Supply Company that he had any recollection of. He has no recollection of having any suggestion at any time for the pencil sketches he discussed with Bell or had in his possession or of having seen any aluminum models of the tie plates. (Rec., Vol. I, p. 315.) This relates to the Storey or ribbed-bottom plate. Faulkner says that after he recommended the top-side shoulder, flat top, lower tie-engaging ribbed plate referred to in his report and identified as Exhibit I, dated May 5, 1904, to the Santa ern Pacific engineers, and put lower tie-engaging ribs on derneath and with fluted grooves on top as shown by the

blue print Exhibit J, dated June 28, 1904, and these plates were supplied by the Independent Railway Supply Company and used in large quantities on the Santa Fe Road from 1904 up to 1908. (Rec., Vol. I, p. 217.) Subsequently in April, 1908, Faulkner saw the work on the Storey plate with lower ribs and approved their use. (Rec., Vol. I, p. 223.) Storey simply took the style of the channelled top rail shoulder flat bottom plate of 1904 and it does not matter whether it was gotten up by the Santa Fe or the Southern Pacific engineers, and put lower tie-engaging ribs on the bottom, as discussed and suggested in Faulkner's report in 1904. (Rec., Vol. I, 232-239.) He does not claim this to be invention. Even if it were conceded that Wolhaupter got up this plate in 1904, it is evident that no use whatever was made of it until Storey produced it in 1908, and it is so fundamentally opposed to the theory and ideas of Wolhaupter that it is fallacy to suppose a plate of this kind was ever in his mind in connection with his former patents or designed by Wolhaupter either as a result of those patents or independently. (Rec., Vol. I, pp. 196, 197.) It was not devised by Wolhaupter or the Supply Co.

XIII.

Doctrine of Res Judicata.

(Br., pp. 179-193.)

It is not proposed to reargue this question as it was fully discussed in the Original Brief (pp. 8-17). Each assertion that the decree was not final, that there was no privity between the Elyria Iron & Steel Company, and the Hart Steel Company, or between either of those companies and the Santa Fe Railroad, and that the estoppel was waived

is unfounded. The final decree was entered in the District Court July 20, 1914. (Rec., Vol. III, 1404.) The Seventh Circuit Court of Appeals was not then in session but on the first day of its next session, October 6, 1914, the record showing the final decree in the Sixth Court was presented and the doctrine of *res judicata urged.* The motion was squarely overruled. not because it was presented too late nor because it was not presented in proper form, but because the court did not subscribe to the doctrine. (Original Br., pp. 8-17, Rec., Vol. III, pp. 1383-1405.) It was impossible to *plead* this *res judicata* and the only way to bring it to the attention of the court was promptly taken.

XIV.

Question of Invention.

The question of invention is finally considered. It ignores entirely the showings of anticipation, prior patents, prior published articles and practically most of the prior devices used, but even with that done, fails to show any patentable idea or true invention either embodied in or resultant from the Wolhaupter devices. The cuts (Br., pp. 194, 195) show that to channel the Southern Pacific plate of 1892 (the channel plate) would make a device with upper channeled rail-supporting flanged surface and lower tie-engaging projections or tie clamps. The channel, groove or cavity of the Goldie device of 1892, and it was so channeled so as to have a cross cavity and side bearing, would produce the defendant's tie plate. The Servis device of 1881 needed simply channeling which a number of courts have held not invention to make it into a tie plate with a channeled or flanged upper surface and lower tie-engaging projections. Then follows (Br., pp. 195, 196) a series of im-

aginary plates which have been already discussed (*supra*, p. 28-33.) The various assertions in the remainder of this argument (Br., 198-206) are so illogical and unfounded as to need no refutation, and have already been sufficiently discussed.

XV.

Conclusion.

(Br., 206-7.)

The *prima facie* validity of the Wolhaupter patents disappeared under the showing of the prior art in patents, publications and by use. No Wolhaupter patent device was supported by immediate adoption and use by practically all of the thirteen hundred railroads of the country. The Wolhaupter devices were not used in the form patented and their success is due to variance from, not to embodiment of. The capital invested in the Railroad Supply Company cuts no figure in the case. The gold medal award by the International Jury had nothing to do with the question of anything but superiority of physical manufacture. The question of patent form could not have been and was not litigated in that matter. The word "Wolhaupter" does not occur in the award. It was simply given upon Railroad Supply Company tie plates, crossings, alarm blocks, signals and railway supplies. There was no acquiescence of the trade during the term of any Wolhaupter patent in its validity because the Wolhaupter patents were not worth acquiescing in and other practical forms were found satisfactory. There was no acquiescence by the Southern Pacific Railway which estopped it at the end of cheap furnishing of Harriman plates by the Supply Company from denying the patent validity. This concession applies only to the last Wolhaupter patent. (Rec., Vol. II, 878.) The alleged success in sales is not shown to have been due to any Wol-

haupter device. It probably was largely due to the great increase in demand for tie plates, the extensive system of advertisement and solicitation employed by the Supply Company, and lastly to the Harriman and Storey plates. *Kinney* v. *Bent*, 97 Fed., 337, 339; *Ball & Socket Co.* v. *Edgarton Mfg. Co.*, 96 Fed., 489, 492. The so-called able reasoning of the court in the Hart Steel Company case is more than met by its own former decisions and the decision of the Sixth Circuit Court of Appeals.

If Wolhaupter did anything at all in his patents it was only a slight advance over the prior devices and not patentable invention.

Atlantic Works v. *Brady*, 107 U. S., 192.
Double-Pointed Tack Company v. *Two Rivers Manufacturing Company*, 109 U. S., 117, 120.
Bussey v. *Excelsior Manufacturing Co.*, 110 U. S., 131, 146.
Phillips v. *Detroit*, 111 U. S., 604, 608.
Morris v. *McMillin*, 112 U. S., 244, 248-9.
Hollister v. *Benedict & Burnham Mfg. Co.*, 113 U. S., 59, 71.

We point, also, to the principle that what infringes, if later; anticipates, if earlier, and respectfully ask the affirmance of the decree of the Circuit Court of Appeals of the Sixth Circuit (No. 67) and the reversal of the decree of the Circuit Court of Appeals of the Seventh Circuit (No. 95).

Respectfully submitted,

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SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1916.

No. 67.

THE HART STEEL COMPANY and GUILFORD S. WOOD,
PETITIONERS-DEFENDANTS,

v.

THE RAILROAD SUPPLY COMPANY,
PLAINTIFF.

SUPPLEMENTARY BRIEF FOR DEFENDANTS.

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SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1916.

No.

THE HART STEEL COMPANY AND GUILFORD S. WOOD, PETITIONERS-DEFENDANTS,

v.

THE RAILROAD SUPPLY COMPANY, PLAINTIFF.

No. 95.

THE RAILROAD SUPPLY COMPANY, PETITIONER-PLAINTIFF,

v.

THE ELYRIA IRON AND STEEL COMPANY, DEFENDANT.

UPPLEMENTARY BRIEF FOR DEFENDANTS IN BOTH CASES.

We submit this brief in behalf of the defendants in both es as a supplement to our main brief for the purpose of senting from a somewhat different point of view the es of the patentability of the alleged tie-plate inven- s shown, described and claimed in the three Wolhaup- patents in suit and of the alleged infringement of those nts by the tie plates made by the Elyria Iron & Steel pany and sold by the Hart Steel Company to the ison, Topeka & Santa Fe Railroad, and further to ac- uate some of the positions of our main brief which we

believe that the court will find conclusive in favor of the defendants.

In our main brief we have set forth propositions which seem to us decisive of this case, viz., that, after the final decree in the Elyria case dismissing the bill of complaint, the Court of Appeals for the Seventh Circuit erred in not holding that the plaintiff in the Hart case was bound by that decree, and in not dismissing the bill of complaint in the Hart case (Main brief, pp. 8–17), and that the Wolhaupter patents in suit are void for lack of invention in view of the prior art (Main brief, pp. 18–28), and are not infringed. (Main brief, pp. 80–84.)

We call attention particularly to the clear showing in our main brief (pp. 72–80), that the Wolhaupter patents do not show or describe tie plates of commercial value. In fact no tie plates as shown and described in those patents were ever put into commercial use.

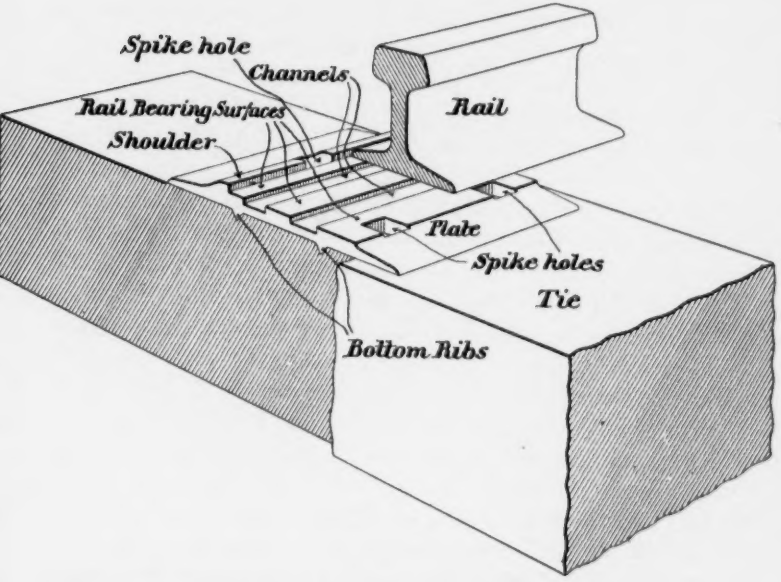
The patents are mere paper patents. If there were doubt as to their validity and as to non-infringement, the plaintiff has shown nothing in the history of the alleged inventions which might incline the court in its favor as to those issues; but we respectfully submit that on the record there can be no doubt that the Wolhaupter patents are lacking in patentable quality and are not infringed. If this be so, no amount of commercial success could cure the fatal defects in plaintiff's case.

> *McClain* v. *Ortmayer,* 141 U.S. 419, 428.
> *Grant* v. *Walter,* 148 U.S. 547, 556.
> *Duer* v. *Corbin Cabinet Lock Co.,* 149 U.S. 216, 224.

In this supplementary brief, and strictly in confirmation of the propositions for which we contend in our main brief, we shall, after a few preliminary statements, approach the issues from the point of view of the defendants' alleged infringing tie plate, illustrated in the cut on the opposite

page, and deal specifically with the features of that plate in comparison with the features of the tie plates of the art prior to Wolhaupter, discussing somewhat in detail the functions and modes of operation of the different tie plates involved in this controversy. We insist that we thus demonstrate that the Wolhaupter patents in suit, if valid, cannot be construed so as to cover the defendants' tie plate.

Defendants' Tie Plate



Our first proposition is that the defendants' tie plate cannot be within any patent for an invention made at the dates of the alleged inventions of the patents in suit, for when compared with the art prior to those dates, it does not embody any patentable invention over that prior art.

In other words, the prior art was such at the dates of the Wolhaupter inventions that neither he nor anyone else could then take a valid patent which would cover defendants' tie plate, for it embodied no patentable invention over that prior art. The defendants' tie plate is merely a mechanical and unpatentable variant of what was then old. Therefore, if the Wolhaupter patents cover defendants' tie plate, they must be invalid. If valid, they cannot be infringed.

This conclusion is inevitably reached from every point of view. We shall first show that the defendants' tie plate is nothing but a well known and widely used form of tie plate of the prior art, modified by cutting in its top surface channels or grooves parallel to the rail so as to save weight and material, and that this modification could not have involved patentable invention because long prior to Wolhaupter such treatment was a common practice in all the arts dealing with metal devices where the saving of weight or material is important, and because it was a common and well known practice in the specific art of tie-plates.

Secondly, it will appear that there is nothing patentable in the defendants' tie plate as compared with the prior art, because in that plate there are merely aggregated or brought together certain well-known features of old tie plates, each of which operates in the defendants' tie plate in exactly the same way and with exactly the same function and result as in the tie plates of the prior art, with no new result from the aggregation other than the sum of the old results of each acting independently. There is nothing patentable in such an aggregation (authorities, *infra,* p. 31).

This demonstration that the defendants' tie plate embodied no patentable invention over the art prior to Wolhaupter, necessarily establishes the fact that, no matter what may be the scope of the Wolhaupter patents, they

cannot be both valid and infringed. They can only be valid if they describe and claim inventions patentable over the prior art, and inasmuch as the defendants' tie plate does not embody any invention patentable over that art, it cannot infringe the Wolhaupter patents, or any other patents of Wolhaupter's dates, or else the Wolhaupter patents are invalid.

If the court agrees with this view it will be unnecessary for it to examine the Wolhaupter patents and to construe them.

But as the court may feel that our presentation of the case would be incomplete unless we approach the issues of the validity of the Wolhaupter patents in suit and of infringement by the defendants' tie plate by the more orthodox method of determining definitely by a careful reading of the specifications what those patents describe and claim, comparing the tie plates therein shown and described with the prior art, and considering whether the alleged inventions therein set forth and claimed (assuming that the conclusion is reached that the patents are not absolutely invalid for lack of patentable quality), are embodied in the defendants' tie plate, the second portion of this brief (p. 35) will take up the matter from this point of view. In that second portion we shall show that the defendants' tie plate does not embody any of the alleged inventions which are described and claimed in the Wolhaupter patents in suit, and that if the claims in issue of those patents were construed so broadly and vaguely as to read upon the defendants' tie plate, they clearly would be anticipated and invalid in view of the prior art. This conclusion, that the Wolhaupter patents in suit cannot be both valid and infringed, is the same that is reached by merely comparing the defendants' tie plate with the prior art, as we do in the first part of our brief, without such full consideration of those Wolhaupter patents.

THE PATENTS AND THE CLAIMS IN ISSUE.

For the convenience of the court we here identify by name, number and date the Wolhaupter patents in suit and the claims in issue.

The Wolhaupter patents in suit and the claims in issue are as follows: —

No. 538,809, issued May 7, 1895, for a "Tie Plate", to B. Wolhaupter on an application filed March 13, 1895. (Rec. p. 11.)

No. 691,332, issued January 14, 1902, for a "Railway Tie Plate", to B. Wolhaupter on an application filed May 3, 1897, and renewed November 9, 1901 (Rec. p. 15), and

No. 721,644, issued February 24, 1903, for a "Tie Plate", to B. Wolhaupter on an application filed March 31, 1902. (Rec. p. 18.)

The claims in issue are as follows: —

No. 8 of patent No. 538,809.

Nos. 1, 2 and 3 of patent No. 691,332, and

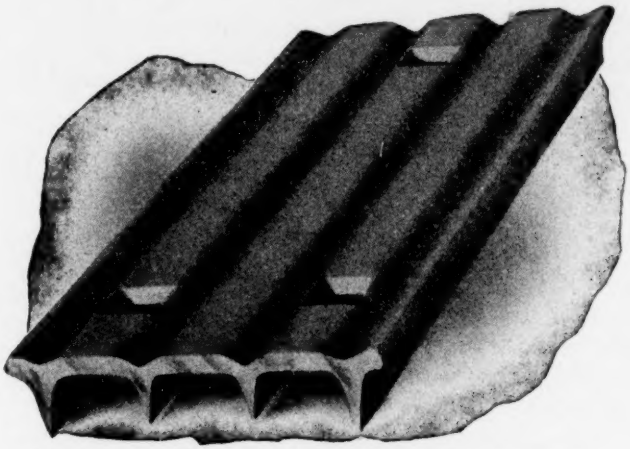
Nos. 7 and 9 of patent No. 721,644.

The Railroad Supply Company, owner of these patents, owns many other patents on tie plates, and manufactures tie plates under them. (Bell, Rec. p. 80, Q. 6.)

It is not pretended that any tie plate of either the second or third Wolhaupter patents was ever made.

The plaintiff does not now make, and has not made for the past twelve years, any tie plate in the least resembling that shown and described in the first Wolhaupter patent in suit. More than twelve years ago it made a comparatively small number of tie plates, which are alleged to have had some, but not all, of the features of that patent. (Bell, Rec. p. 129.) Their resemblance to the tie plate of the first Wolhaupter patent in suit was superficial only. These plates, illustrated in Plaintiff's Exhibits No. 24 and

No. 25 (Rec. pp. 83, 84), of which we here reproduce No. 24, had deep flanges on the bottom and shallow grooves



"Exhibit No. 24," Illustration Wolhaupter Tie-Plate.
(A comparatively small number made twelve years ago.)

in the top. Both flanges and grooves in these plates were parallel to the tie and formed a sort of truss construction something like that of the plate of the first Wolhaupter patent in suit. The plates had nothing for the rail to abut against, so that the rail bore directly against and cut the necks of the spikes. The organization of these plates was entirely different from that of the defendants' alleged infringing plate, and their features have no counterparts in that plate.

The alleged infringing tie plate was designed by Mr. Storey, Chief Engineer of the Atchison, Topeka & Santa Fe Railway System (Rec. p. 308, Q. 10; p. 316, Q. 66). It is Defendants' Exhibit R. In the fall of 1908 the Atchison Railway gave an order for upwards of 5,000 tons (1,500,000) of these plates to the Elyria Company, defend-

ant in suit No. 95, through the Hart Company, the selling agent of the Elyria Company and the defendant in suit No. 67. (McKee, Rec. p. 496, X-Q. 52.) *The manufacture and sale of these tie plates placed for the first time this specific form of plate upon the market.* This manufacture and sale constitute the alleged infringements in these cases.

It was not until December, 1908, after suit had been brought against the Hart Company, that the plaintiff began to market this same form of tie plate. (Bell, p. 134, X-Q. 197.)

The alleged infringing tie plate was therefore developed commercially by the defendants, not by the plaintiff. This is admitted by the plaintiff's president and treasurer, Hawley. (Rec. p. 74, X-Q. 57.) *The defendants' plate is not a development in any sense of the Wolhaupter patents in suit or any of them, nor of any Wolhaupter tie plates.*

This is distinctly not a case in which the courts will be inclined to deal favorably with a patent because the patented device made by the plaintiff has proved of commercial value and has been copied by the defendant. Here the reverse is true. The defendants' tie plate is totally unlike the tie plates of any of the patents in suit or any previously manufactured by the plaintiff and was independently developed and first placed upon the market by the defendants. The defendants did not follow or copy the plaintiff, but the plaintiff imitated them. (See our main brief, pp. 81–84.)

We shall show that the claims in issue of the Wolhaupter patents in suit are anticipated, that they are void for lack of invention, and that when read, as they must be, in view of the description and drawings of the patents and n view of the prior art, they are not infringed.

RES ADJUDICATA.

We need not review in this brief the history of the litigation which has been brought to a head in this Court. The facts on which we rely are fully stated in our main brief, pp. 8–17. It suffices to say here that we submit that the plaintiff was bound by the final decree dismissing the bill of complaint in the Elyria case and that the Court of Appeals for the Seventh Circuit erred in not so holding in the Hart case.

TIE PLATES.

The subject of each of the three Wolhaupter patents in suit is a tie plate.

A tie plate is primarily an iron or steel plate about three-eighths of an inch thick and about six inches wide by eight inches long. It is inserted between a railroad rail and the tie for the purpose of providing a broad bearing on the tie and thereby preventing the cutting of the rail into the tie. A secondary purpose of the tie plate is to unite the rail and the tie in such a manner as to assist in resisting the "spreading" or lateral movement of the rail on the tie.

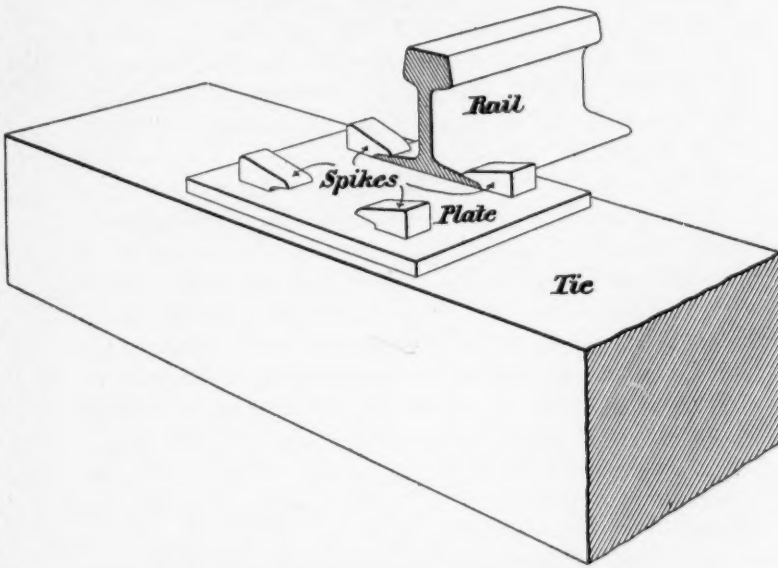
Years ago when hard wood ties were plentiful and cheap, and when rails and rolling stock were light, there was but little necessity for a tie plate, because the rails did not cut into the tie, and the spikes which held the rail in place were firmly held by the hard wood tie.

Gradually the supply of hard wood ties has diminished and the rails and rolling stock have become heavier and heavier, so that in modern times there is a wide need for a tie plate, particularly at curves and places where the traffic is heavy and the strains on the rails are great. (Rec. p. 101.)

The earliest form of tie plate as used by the Pennsylvania Railroad in 1870 or thereabouts was a plain flat

plate punched at suitable places for the spike holes. (Bell, Rec. p. 106, Q. 46.) It is illustrated in the accompanying drawing.

Flat Tie Plate

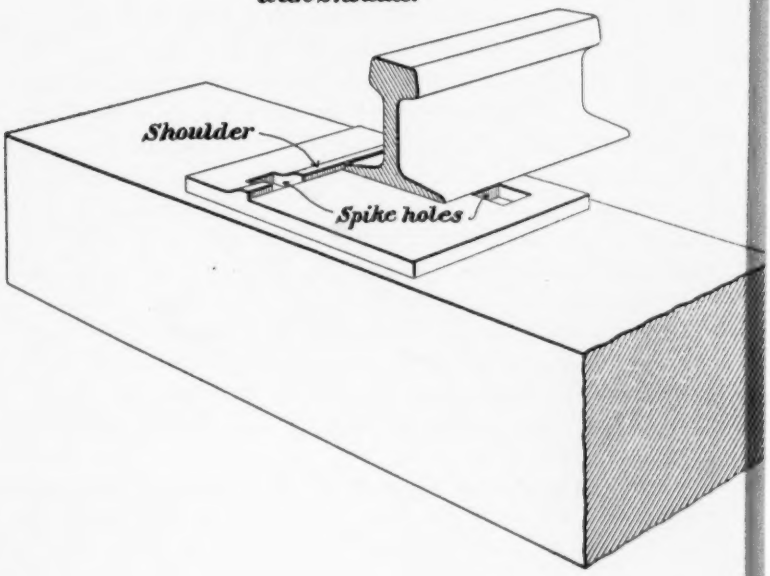


This plate adequately protected the tie from the cutting of the rail, and it also caused the spikes on both sides of the rail to act together to prevent the rail from "spreading", because all the spikes are tied together, so to speak, by the plate. (Rec. p. 103.) Without a plate the spikes on the outside of the rail are the only ones to resist the outward lateral strain of the wheel flange against the rail and the consequent tendency of the rails to spread or separate, and the inner spikes do not assist the outer spikes in performing this function. With a tie plate, even of the simple type above illustrated, the rail pushes against the

outer spikes, which push against the plate, which in turn pulls on the inner spikes, so that with such a plate both the outer and inner set of spikes resist the spreading of the rails. (Bell, Rec. p. 103, Ans. to Q. 44.)

But with this plate the flange of the rail would wear into the necks of the outer spikes and weaken and destroy them and it was soon perceived that this wear could be avoided to a large extent by providing the upper surface of the plate with *a shoulder* against which the outer edge of the flange of the rail should abut, as shown in the drawing below. (Bell, Rec. p. 106, Q. 47.)

Old Tie Plate
with Shoulder



This was a very common expedient in the early art. It is illustrated in a number of patents prior to Wolhaupter (Wells, No. 203,570, Rec. p. 1088, at D; Dockstader, No. 462,399, Rec. p. 1158; Goldie, No. 485,030, Rec. p. 1182, at 9; Churchward, No. 492,528, Rec. p. 1192, at A^1; Servis, No. 524,868, Rec. p. 1232, at b^2, etc.) Tie plates with such shoulders went into wide use long before any of the Wolhaupter alleged inventions here in controversy were thought of; for example: the Goldie plates in 1892 (Dyer, Rec. pp. 434, 435), the Sacramento plate in 1893 (Storey, Rec. pp. 308, 309; Wallace, pp. 554, 555, Exhibit 60, drawing on second page after p. 556, p. 568), and the C. A. C. plate in 1892. (Bell, Rec. p. 190.) Plaintiff's witness Bell illustrates in Complainant's Exhibit No. 45 (Rec. p. 106) the well known form of prior art plate with such a rail-abutting shoulder.

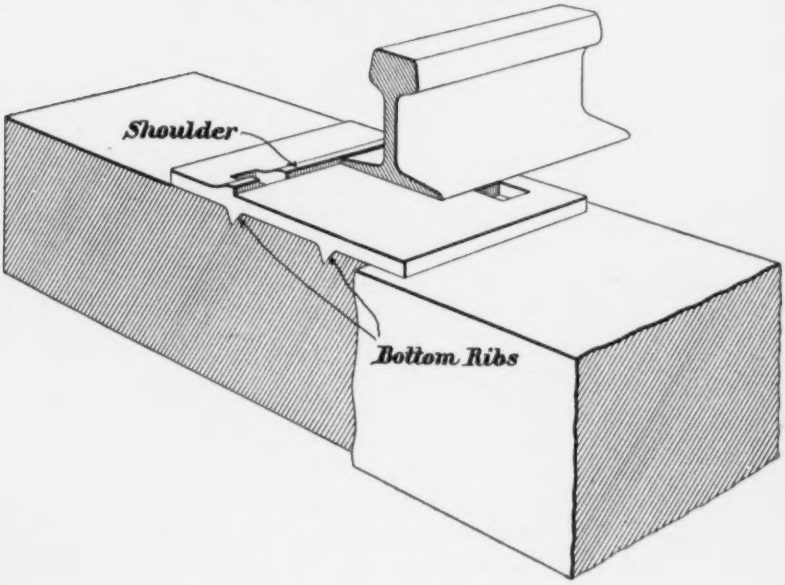
It was also perceived early in the art that it would be an advantage to provide some kind of a projection on the bottom of the plate to engage the tie and thus assist the spikes in preventing lateral movement of the plate and rail on the tie. Such projections on the bottom of the plate were employed in a variety of forms long prior to Wolhaupter's alleged inventions. The Goldie plates of 1892 (Rec. p. 820) had on the under side of the plate two V-shaped *ribs* parallel to the rail (Dyer, Rec. p. 434, Q. 12; Zimmerman, p. 529; Ambler, p. 543), as shown in the Goldie patent No. 485,030, at 17, 17. (Rec. p. 1182.) Other Goldie plates of 1891 had four claws, one at each corner. (Bell, Rec. p. 115.) The C. A. C. plate had a number of V-shaped teeth on the bottom (Bell, Rec. p. 190), as shown in the Churchward patent No. 508,086. (Rec. p. 1207.)

Tie plates embodying both the shoulder on the top and

projections of some kind on the bottom are shown in the patents above cited and in the Railroad Gazette, Vol. 24, July 8, 1892, reproduced as Defendants' Exhibit C. C. (Rec. p. 952), which shows the C. A. C. or Churchward plates, and in Vol. 24, November 11, 1892, p. 839, reproduced as Defendants' Exhibit D. D., which drawing shows one form of the prior art Goldie plate. (Rec. p. 954.)

We illustrate here a tie plate of this character known as the "Goldie Tie Plate" used in 1892 (*infra*, p. 55) as typical of this type of plate having both the rail-abutting shoulder and the tie-engaging ribs. This drawing shows the same plate as Defendants' Exhibit D. D. above referred to.

Old Tie Plate
with Shoulder and Bottom Ribs



The *ribs* on the bottom of this plate run across the grain of the tie. They sink into the tie and as they are transverse to the grain of the tie they securely prevent the plate from slipping on the tie. Being shallow and wide they do not attach the plate to the tie. They, as well as the shoulder, are present in the defendants' alleged infringing plate.

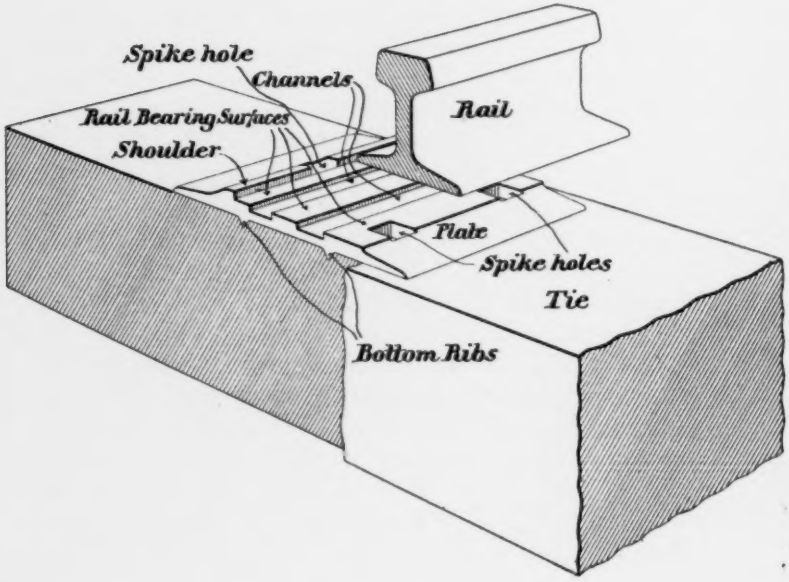
These *ribs* are to be carefully distinguished from bottom "*flanges*", which run *parallel* to the tie and are comparatively thin, sharp and deep, so that they may be driven deeply into the tie and securely attach the plate to the tie. They separate the grain of the tie like wedges and open spaces in the tie at the ends of the flanges. Such "flanges", as we shall show, admittedly do not prevent the plate from slipping lengthwise of the tie. Such flanges running lengthwise of the tie are features of the plates of the Wolhaupter patents in suit and of the "Wolhaupter Tie Plate" Exhibit No. 24 above shown (p. 7), *which the defendants' plate does not embody*. This matter we discuss more fully (*infra*, p. 38).

The old tie plate shown in the drawing on page 13 performs every essential function which a tie plate is capable of performing. (1) It *protects the tie* from the wear of the rail. (2) It has *a shoulder* against which the outside edge of the lower flange of the rail abuts, and (3) it has *ribs* crosswise to the tie on the bottom of the plate which grip into the upper surface of the tie and assist the spikes in holding the tie plate and consequently the rail in place and from lateral spreading.

Although this form of tie plate is in every respect satisfactory, it was in one small particular capable of an improvement, not however based on its character or capacity to perform its useful functions which were the same after as before the improvement was adopted. As shown in the cut on page 13, it contains more metal than

is absolutely necessary and consequently is more expensive than need be. Tie plates are sold by the ton and their number runs into the millions. If a few ounces can be saved on each tie plate, that means a saving of many dollars in the aggregate cost of the tie plates. To make the tie plates cheaper superfluous metal should be eliminated. This has always been common practice in articles made of metal. Hence when Mr. Storey of the Atchison Railway designed the defendants' tie plate, which was made and sold in the fall of the year 1908, he *modified the tie plate shown in the cut on page 13 by making two shallow channels or grooves in the top of the plate,* as shown in the accompanying cut.

Defendants' Tie Plate



From a period at least as early as 1892 when such tie plates, without the channels, were known (*supra,* p. 13) there could have been no invention involved in making such channels in the plate. Even if the channels or grooves were new with him, it could not be contended that Mr. Storey, the designer of the defendants' tie plate, made any invention when he caused those channels to be rolled in the plate to save material. He merely took out metal from places where it was not needed, thus saving about thirteen per cent of the material of the plate and thereby reducing the cost by that thirteen per cent. (Bell, Rec. p. 118.) The saving in two million plates at $40 a ton would be $34,000. (Bell, Rec. p. 118.) There are about 2,800 plates to a mile of railroad. (Isaacs, Rec. p. 455.) Two million plates would be used on about 700 miles of single track.

The plaintiff avers that these channels in addition to saving material also give opportunity for the discharge of sand, grit and water, which might otherwise accumulate between the rail-bearing surfaces and the rail. The plaintiff argues that the sand and grit, if allowed to remain between the top of the plate and the rail, might have a grinding action on the plate as the rail moves up and down on the plate as the trains pass over it. The record shows that this alleged grinding action of the sand between the rail and the plate is largely imaginary. (Storey, Rec. pp. 323, 327, 318.) It is admitted that in any event it is *very slow.* (Wallace, Rec. p. 575.)

The employment of grooves for this discharge function, whether or not of any importance, was well known in the art prior to Wolhaupter. For example, it is fully set forth in the prior patent of 1878 to Wells No. 203,570 (Rec. p. 1088), which describes such channels in a rail-supporting chair or plate, and says that they "*serve as*

receptacles for sand and grit that may enter between the chair and rail". (Wells patent, p. 1, 2d column, line 4.)

In view of the Wells patent and the other instances in the prior art, to which we shall call attention, which show tie plates and other rail-sustaining devices having channels or grooves in their upper surfaces, no one at the date when Wolhaupter made the earliest of his alleged inventions of the patents in suit could have obtained a valid patent on or covering the defendants' tie plate, because that plate is nothing but the widely known and used tie plate of the prior art already possessing the features of a rail-abutting shoulder on its upper surface and ribs across the tie on its bottom, as shown in the drawing (*supra,* p. 13), modified by cutting the Wells channels or grooves in its upper surface. This should be an end of the plaintiff's case. Inasmuch as the defendants' tie plate is an unpatentable modification of the art prior to Wolhaupter, the claims of the Wolhaupter patents in suit, if they cover such an unpatentable modification, are invalid. If they do not cover it, they are not infringed. There is no escape from the dilemma. It is fatal to the plaintiff's case.

As proof of this simple proposition, that there could have been, at the dates of the Wolhaupter inventions of the patents in suit, no patentable invention in cutting channels in the top of any prior art tie plate, we shall refer first to the many instances in the tie plate art prior to Wolhaupter where such channels in the upper surfaces of tie plates are shown and described, thus showing that *in this particular art* they were known and were common mechanical expedients clearly within the capacity of the ordinary designer of a tie plate who would naturally and without the exercise of the least invention make them in a plate to save weight.

Then we shall show (*infra,* p. 27) that this Court in the case of *Peters* v. *Hanson,* 129 U. S. 541, and other cases has

recognized the *general proposition* that the making of channels in iron articles of all kinds for the purpose of saving weight and obtaining other incidental advantages has been such a common expedient and practice in all the iron using arts that it is impossible to predicate invention upon it. Other courts also have recognized this general principle on which we stand in this case.

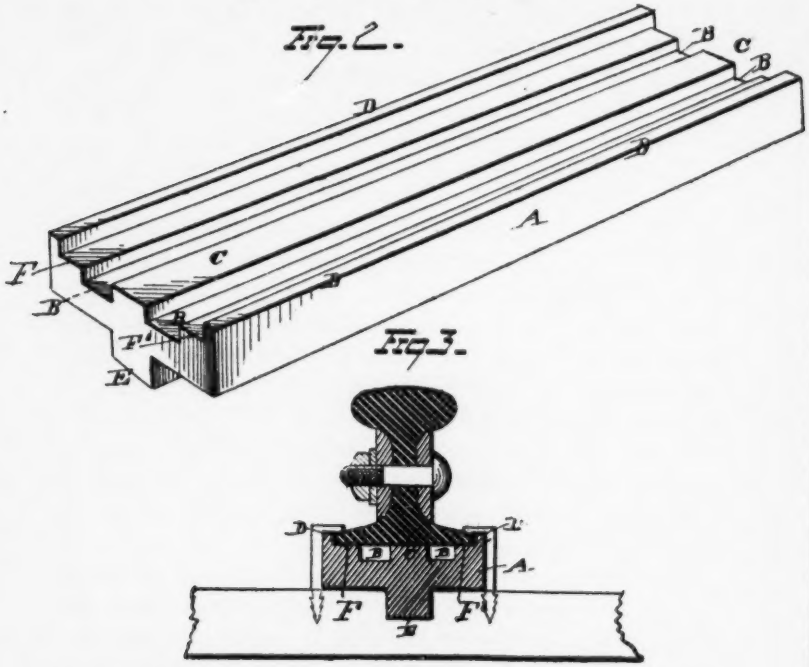
MAKING TIE PLATES WITH CHANNELS IN THEIR UPPER SURFACES VERY COMMON IN THE PRIOR ART.

When Mr. Storey designed the defendants' tie plate with these two shallow channels on the upper side of the plate he was merely following exactly what was taught by the prior art, and was not doing anything that was new with Wolhaupter in the patents in suit.

Among the patents of the prior art which show and describe such channels in tie plates and other rail-supporting devices are the following: —

The *Wells patent* of 1878, No. 203,570 (Rec. p. 1088), shows a railway chair which is in effect merely a tie plate long enough to extend over three or four ties. The Wells device is made with two longitudinal channels or grooves B, B parallel to the rail. **These channels are the exact prototypes of the channels in the defendants' tie plate.** In the device of the Wells patent, (Figs. 2 and 3 of which are here produced), as in the defendants' tie plate, the

Figs. 2 and 3 of Wells Patent.



bottom of the rail rests upon three surfaces F, C and F', which are lengthwise of the rail, the surfaces F and F' being under the sides of the rail, and the surface C under the middle of the rail. The outer side of the rail bears against the side flange or shoulder D. This is precisely the defendants' arrangement. The Wells patent explains how the rail is supported by the three bearing surfaces F, C and F' and then states: —

> "Said bearings F, F are thus separated from the central bearing C, by *grooves B, B which serve also as receptacles for sand or grit that may enter between the*

chair and rail, and thus insure a firm bearing of the rail on the chair-bearings at all times.

"The grooves B B also enable the chair to be made much lighter than the ordinary chair, and yet possess an equal amount of strength, owing to the fact that the rail is fully supported at all points where the chair is subjected to strain — namely, at its center and sides." (Wells patent, p. 1, column 2, lines 2–14.)

Thus in the prior Wells patent there is disclosed the exact arrangement of channels and rail-bearing surfaces which is present in the defendants' alleged infringing tie plate, and the functions of these channels or grooves are fully explained, viz., (1) to save weight without loss of strength, where strength is not needed; and (2) to serve as receptacles for the sand and grit.

In view of this Wells patent alone it is impossible to predicate any invention over the prior art in making the defendants' tie plate with two channels parallel to the rail exactly as shown in this Wells patent.

The purpose, function, location and mode of operation of such channels in the upper surface of a rail-supporting device being fully known and understood in the art prior to Wolhaupter, it could not have required any invention in making such grooves in a rail-supporting device, whether it be a rail chair or a tie plate. (See our main brief, p. 33.)

We submit that the plaintiff, no matter what patents it may have, cannot prevent these defendants from making and selling a tie plate of the prior art (*supra,* p. 13) having exactly the same channels in exactly the same location and for exactly the same purposes as shown and described by Wells in his patent No. 203,570.

The Wells patent also shows the other features of the defendants' tie plate, viz., a shoulder D against which the edge of the lower flange of the rail abuts and also a bot-

tom rib E, which is set into the tie. The Wells patent absolutely prohibits any interpretation of the Wolhaupter patents in suit which would make them cover the defendants' tie plate.

The plaintiff's attempt to meet the Wells patent by calling attention to the fact that it shows and describes a "rail chair", which extends over three ties, and not a tie plate, is futile. A rail chair serves the purposes and answers all the requirements of a tie plate; it is placed between the rail and the tie, and it prevents the rail from cutting the tie and from spreading. It is practically a long tie plate. Even if it did not have the entire and exact functions of a tie plate, as it does, its analogy to a tie plate is clear, and this Court has held over and over again that the application of an old device to an analogous use does not constitute patentable invention. A leading case is that of *Penn. R. R. Co.* v. *Locomotive Truck Co.*, 110 U. S. 490, in which this Court said, p. 494:—

> "It is settled by many decisions of this court, which it is unnecessary to quote from or refer to in detail, that the application of an old process or machine to a similar or analogous subject, with no change in the manner of application, and no result substantially distinct in its nature, will not sustain a patent, even if the new form of result has not before been contemplated."

As illustrations of this principle this Court in the *Truck* Case discusses several English cases, among them that of *Harwood* v. *Great Northern Ry. Co.*, 2 B. & S. 194, 222, and 11 H. L. Cas. 654 (our main brief, p. 23), decided in 1865, in which the House of Lords held that *there was no invention in making channels in fish plates* to receive the heads of bolts and to save weight, in view of the well-known use of channel iron for like purposes, and in par-

ticular of the use of such iron under the timbers of a bridge. (Fish plates or "fishes" are the pieces of iron which are placed on opposite sides of the ends of two rails and are bolted together, the bolts passing through the webs of the rails to hold the ends of the rails firmly together.)

This Court (110 U. S. p. 498) quotes with approval the language of Lord Wensleydale in the House of Lords, in the Harwood case: —

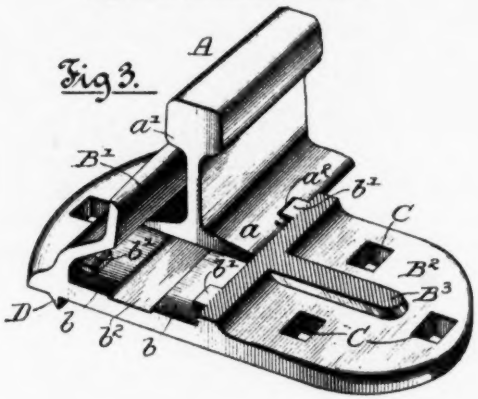
> "The channelled iron was applied in a manner which was notorious, and the application of it to a vertical fish would be no more than the application of a well known contrivance to a purpose exactly analogous or corresponding to the purpose to which it had been previously applied."

The discussion of the Fish Plate Case by this Court is an apt illustration of our proposition here, namely, that the making of channels in the upper surface of a tie plate, as in any other metal work, did not constitute patentable invention when Wolhaupter made his alleged inventions.

In addition to the Wells patent, other prior patents show and describe tie plates similar to defendants' plate and having grooves or channels in their upper surfaces as well as the other features of defendants' plate.

The *Dockstader patent* No. 462,399, November 3, 1891 (Rec. p. 1158), shows and describes a lock rail joint, which performs every function of a tie plate, and has not only a groove in the upper face of its base plate, but also every feature of the defendants' tie plate. It is most clearly shown in Fig. 3, here reproduced.

Fig. 3 of Dockstader Patent.



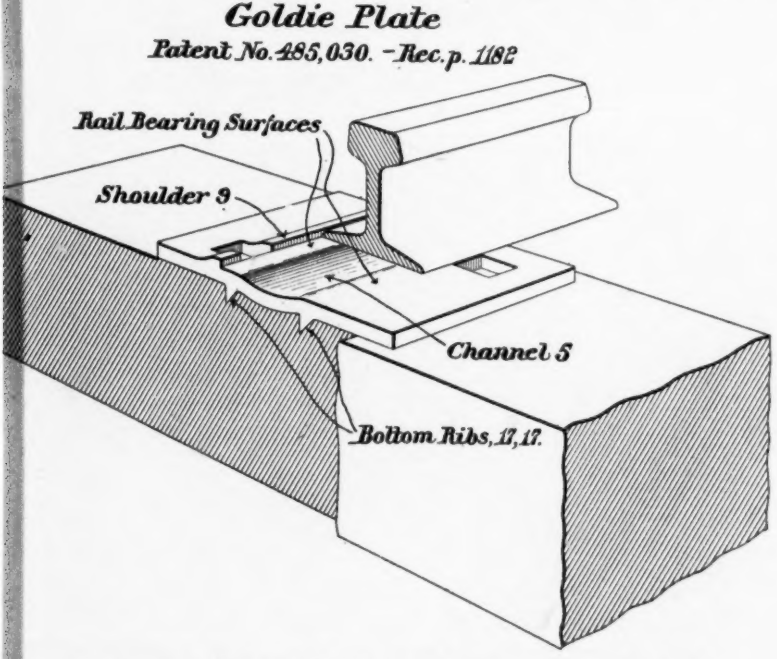
The plate is provided on its bottom with ribs, D, D, and on its top with a shoulder (shown partially cut off in Fig. 3) against which the outer edge of the bottom of the rail bears. The top has a groove b^3 underneath the middle of the rail. It therefore has every feature of the defendants' tie plate, viz., *ribs* on the bottom projecting into the tie, a rail-abutting *shoulder* on the top and a *groove* underneath the rail. If the defendants' tie plate is an infringement of the Wolhaupter patents in suit, those patents are anticipated by this Dockstader device, which has every element of the defendants' tie plate.

The Dunham patent No. 469,386, February 23, 1892 (Rec. p. 1169), shows a tie plate (see our main brief, p. 48) formed of corrugated metal, the corrugations running parallel to the tie and at right angles to the rail. The hollows of these corrugations perform the function of providing receptacles for the sand and grit and of preventing the rail from grinding the sand and grit on the top of the plate, which function the plaintiff alleges is to be attributed to the grooves in the defendants' tie plate. The Q. &

W. Co., the plaintiff's predecessor in title to the Wolhaupter patents in suit, owned this Dunham patent. (Rec. p. 886.)

The plaintiff's praise of *"corrugated top" plates* should be given to this Dunham patent instead of to Wolhaupter, for Dunham anticipated Wolhaupter in this feature.

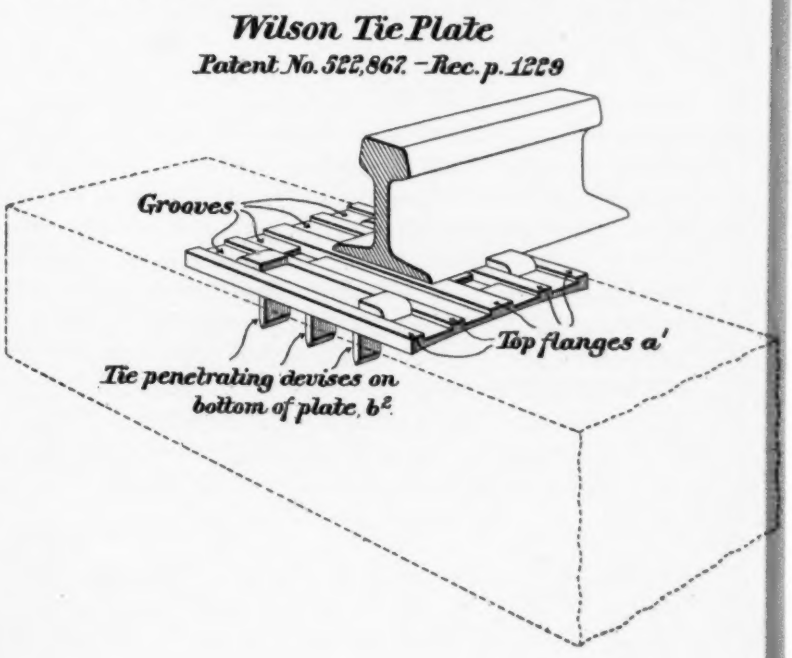
The Goldie patent No. 485,030, October 25, 1892 (Rec. p. 1182), shows a tie plate, illustrated in the accompanying drawing and also at page 36 of our main brief, having a depressed central portion 5 underneath the center of the rail. The tie plate is provided on its bottom with two tie



penetrating ribs 17, 17 and on its top with a shoulder 9 against which the side of the rail abuts. The hollow 5 beneath the rail is shown, as in the patent, of substantial

depth and is undoubtedly deep enough to carry off sand and grit to the same extent as do the grooves in the defendants' tie plate. The Goldie plate has every structural feature of the defendants' plate, and being in the art prior to the Wolhaupter patents in suit absolutely prevents any construction of those patents which would render them infringed by the defendants' plate. The Goldie construction, like that of the first Wolhaupter patent in suit, does not save any weight, however, because the plate is of substantially the same thickness throughout.

The Wilson patent No. 522,867, of July 10, 1894 (Rec. p. 1229), shows a tie plate, illustrated in the accompanying drawing, having flanges a' running parallel to the tie and across the rail, on which flanges the rail rests. Two of



the four grooves thus formed between these flanges contain a special spike device shown separately in Fig. 7 of the patent. The grooves serve the double purpose of saving weight and forming drains for the sand and grit to escape from the top of the flanges a^1, which support the rail.

The Railroad Gazette, Vol. 24, 1892, p. 221 (Rec. p. 950), reproduced as Defendants' Exhibit B, B, shows a Danish tie plate having a groove in its top beneath the center of the rail and running parallel to the rail.

Eisenbahn-Geleise of 1891 (Rec. pp. 963, 965) shows in Fig. 635 (reproduced as Defendants' Exhibit K. K. K. and illustrated at p. 56 of our main brief) and in Figs. 661 and 662 (reproduced as Defendants' Exhibit L. L. L.) a tie plate and a rail chair, respectively, each having a groove parallel to and underneath the bottom of the rail.

In the Defendants' Exhibit D. D. D., the drawings of which are at page 962, Vol. III, and the text of which is at page 513, Vol. I, both drawings and the text being taken from the "Railroad Gazette", Vol. 19, September 30, 1887, page 630, there is shown and described a tie plate, illustrated at page 53 of our main brief, which was used in Europe, having on its bottom triangular shaped ribs parallel to the rail and across the tie, and having on its top a rail-abutting shoulder and two grooves or depressions under the rail in the same position as the grooves in the defendants' tie plate. Of the grooves the text states:—

> *"The groove shown in the upper surface was apparently to lighten the plate being taken out at a point where the metal was not needed."* (Rec. p. 514.)

Here is the entire substance of the grooves in the defendants' tie plate. In it the metal is taken out from points where it is not needed to lighten the plate, exactly as in the tie plate described in the "Railroad

Gazette" of September 30, 1887, Defendants' Exhibit D. D. D.

All of these devices of the prior art show that it was common and well known before the date of any of Wolhaupter's alleged inventions of the patents in suit to provide one or two channels or grooves along the top of the tie plate, underneath the bottom of the rail, to save weight and to carry off sand and grit.

It therefore could not have required invention for the defendants, or Wolhaupter, or anyone else at the date of the earliest of Wolhaupter's alleged inventions, to have made such grooves to perform such functions in a tie plate of the prior art (*supra,* p. 13), which was already provided on its bottom with cross tie engaging ribs and on its top with the rail-abutting shoulder, exactly as in the defendants' alleged infringing tie plate.

PETERS v. HANSON.

The case of *Peters* v. *Hanson,* 129 U. S. 541, decided in 1889, from which we have cited in our main brief (p. 23), is, we submit, decisive of the point under discussion, and of the case at bar.

In *Peters* v. *Hanson,* the second patent in suit was for a carriage dash-board, and the alleged novel feature was a lower bar channeled on both sides. The purposes of these channels were the same as the purposes for which the channels in the upper surface of the defendants' tie plate were made, viz., to save weight and yet provide an adequately strong device. The claims of the Peters patent are recited on page 549 of the report. As to this patent the court said (p. 553): —

> "As to reissue No. 9891, claims 1, 2 and 3 relate to channeling or recessing the rail or bar, so that the metal on each side of the channel or recess will be

thicker than the metal at the channel or recess, the necessary effect of such arrangement being that the metal on each side of the channel or recess will be thick enough to form a bearing, and the metal in the channel or recess will be capable of being easily perforated. The channelling or recessing of the foot, covered by claim 11, involves the same idea, and the specification states that thereby the foot may be cast of malleable iron, and may be made light and thin, and be better annealed.

"The idea of using iron with channels or recesses in it, to produce any result due to the existence of such channels or recesses, was old in the state of the art of working in metals."

The Court then refers to the testimony of the witnesses who gave instances of the use of channeled iron articles such as "bridges, *railroad iron*, gears of vehicles, jail work, vault work, safes, fire and burglar proof safes, fences, agricultural implements", also of channels in the iron used for "the feet of desks, stoves, machinery of different kinds, vehicles" (p. 554). "The channelling is for the purpose of securing stiffness, lightness, and it is easy to work", and "channeled iron has been used in mechanics wherever it was desirable to combine lightness and strength", and "parties who generally use large lots of it for building, bridge purposes and other purposes, make contracts for large lots of it and have it rolled to order, and get it cheaper that way".

The Court then states (p. 556):—

"This testimony is uncontradicted, and in view of it the improvements covered by claims 1, 2, 3 and 11 of reissue No. 9891, amount only to applications of old devices to new uses, not involving invention."

The situation before the Court in the above case is precisely that presented in the case at bar. It is clear that if there was no invention in channeling iron articles in order to save weight prior to 1881, the date of the application for the Peters patent, surely there could be no invention in channelling the tie plates of the art prior to Wolhaupter, the date of whose first application is 1895.

The principle of *Peters* v. *Hanson*, which is directly applicable and decisive of the case at bar, was applied by the Canadian Exchequer Court to a closely analogous situation in the tie plate art. That Court in *Servis R. R. Tie Plate Co.* v. *Hamilton Steel & Iron Co.*, 8 Canadian Exch. Rep. 381 (our main brief, p. 25), decided in 1904, held a Canadian patent to Servis void for lack of invention for the same reasons which, we urge, are fatal to the plaintiff's contentions here. The Court said:—

> "Prior to Servis' alleged improvements iron or steel plates had been used as tie-plates; and of course it was common knowledge that the insertion of such a plate between an iron or steel rail and a wooden tie would keep the rail from cutting or wearing the wood of the tie, and so in that respect cause the tie to last longer. *It was also a matter of general knowledge that if one wished to reduce the weight of the plate without loss of strength that could be done by using channel iron or angle iron, or, which comes to the same thing, by having the plate made with flanges or ribs.*"

Other cases in which the principle that there could be no invention in cutting or rolling channels or grooves in metal articles to save weight, etc., are cited in our main brief (pp. 24, 25). We ask especial attention to *Harwood* v. *Great Northern Ry. Co.*, 2 B. & S. 194, 11 H. L. C. 654, 667, 684 (July 6, 1865), discussed with approval by this

Court in *Penn. R. R.* v. *Locomotive Truck Co.*, 110 U. S. 490, cited *supra* (p. 21).

We therefore submit that on the facts and on the authorities the defendants had the right to take the tie plates of the prior art having on the top a shoulder parallel to the rail and on the bottom one or more ribs transverse to the tie, and to make in the top surface thereof (as had been done before) channels or grooves to save weight, and the plaintiff's patents, whatever they may be, cannot cover such a tie plate. Whether or not the channels also serve as drains for the sand is entirely immaterial. The defendants had the right to make the channels, whatever function they might perform. But the capacity of the channels to act as drains was well known in the prior art, as stated by the Wells patent No. 203,570. (*Supra,* p. 19, and Rec. p. 1088.)

DEFENDANTS' TIE PLATE IS AN UNPATENTABLE AGGREGATION OF OLD FEATURES.

There is another way of looking at the facts of this case, which leads inevitably to the same result, namely, that the defendants' tie plate is not patentable over the art prior to Wolhaupter, and therefore the Wolhaupter patents cannot cover it; every feature of the defendants' plate was old prior to Wolhaupter, every function of those features was well known and every feature performs its old function in the defendants' plate, exactly as it performed its function in the plates of the prior art. The defendants' tie plate is an unpatentable aggregation of old features, and therefore cannot be covered by the Wolhaupter patents. (It is significant that no one has attempted to patent the specific form of the defendants' tie plate.)

Those features are:

(1) The rail-abutting shoulder on the top,
(2) The transverse tie-engaging ribs on the bottom, and
(3) The channels in the top.

Each one of these features, old by itself and in combination with the others, as abundantly shown by the prior art already discussed, is a separate and distinct feature by itself and performs its own function independently of any of the other features and their functions.

(1) Whether the other features are present or not, the rail-abutting shoulder offers a brace to the rail and prevents shearing of the spikes (old, *supra,* p. 11);

(2) Whether the other features are present or not, the bottom ribs press into the tie and resists lateral movement (old, *supra,* p. 13), and

(3) Whether the other features are present or not, the channels in the top lighten the plate and possibly act as pockets for the sand (old, *supra,* p. 15).

The defendants' tie plate is, therefore, the clearest possible case of an unpatentable aggregation of old features. It has no patentable features, ideas or characteristics over the art existing prior to Wolhaupter, and it could not properly have been patented or monopolized by any patents taken at the dates of the Wolhaupter patents in suit.

CASES ON AGGREGATION.

It is well settled by the decisions of this Court that an aggregation of old features such as are present in the defendants' tie plate does not constitute patentable invention. Therefore the Wolhaupter patents in suit can not cover it.

The leading case of *Hailes* v. *VanWormer,* 20 Wall. 353, is decisive on this point. In that case the patent in suit was for a base-burning or self-feeding stove involving the combination of a flaring fire-pot supported by a base, a coal reservoir located over the fire-pot and having its lower end contracted, revertible flues outside of the pot to conduct the products of combustion downwards to the base

of the stove and a direct draft obtained by a flue passing out above the fire-pot and provided with damper openings in the exterior of the stove with mica inserted therein. It was the combination of these elements which was alleged to constitute the infringement.

As to the defendants' stove, the court said (p. 372): —

> ". . . The devices used by the defendants produce no new effects, because used in combination. The space around the fire-pot leading to the base doubtless secures the beneficial results long known to follow the use of revertible flues. It may be conceded to be an equivalent for such flues. But the results of its construction are not changed by the fact that a flaring fire-pot, and a supply reservoir with a contracted discharge end, and openings for illumination are used in the same stove. It still operates to conduct the products of combustion to the base, and into the exit flue. No new operation is given to it by the combination. The same may be said of every other device employed by the defendants which is also in the complainant's combination. Each produces its appropriate effect unchanged by the others. That effect has no relation to the combination; in no sense can it be called its product. Thus far nothing novel is produced. This, then, is mere aggregation of devices, not invention, and consequently the use of those devices, either singly or together, cannot be held to be any infringement of rights belonging to the complainants."

As to the second claim, which covered a combination in a base-burning stove of a reservoir with a contracted discharge end, an expanded fire-pot and the downward extending flues, the court said, page 373: —

". . . it is very evident that the combination of the three devices named is not the work of invention. They have no relation to each other. Neither the form of the feeder, nor the shape of the fire-pot bears at all upon the direction of the draft passages. There is no novel result flowing from the joint operation of the three devices. The revertible flues have no more to do with a stove supplied by a feeder than they would have with a stove supplied by hand. There is, therefore, nothing in this claim that interferes with what the defendants have done."

As to the general law of combinations and aggregations the court states, page 368: —

"It must be conceded that a new combination, if it produces new and useful results, is patentable, though all the constituents of the combination were well known and in common use before the combination was made. But the results must be a product of the combination, and not a mere aggregate of several results each the complete product of one of the combined elements. Combined results are not necessarily a novel result, nor are they an old result obtained in a new and improved manner. Merely bringing old devices into juxtaposition and there allowing each to work out its own effect without the production of something novel, is not invention. No one by bringing together several old devices without producing a new and useful result the joint product of the elements of the combination and something more than an aggregate of old results, can acquire a right to prevent others from using the same devices, either singly or in other combinations, or, even if a new and useful result is obtained, can prevent others from using some of the devices, omitting others, in combination."

This case is directly in point and conclusive of the case at bar. The features of the stove there involved were "aggregated" in the patented stove in precisely the same way as are the features of the defendants' tie plate aggregated or brought together in that plate. Each feature performs its old function in its own way, and the joint product is nothing more than an aggregate of the old results. There is no co-operation between the various elements.

The principle of the case of *Hailes* v. *Van Wormer* has been applied by this and other courts in innumerable cases, many of which are cited in our main brief (pp. 28–31).

For these reasons we submit that the defendants' tie plate had no feature, idea or characteristic that was patentable over the tie plates of the art prior to Wolhaupter, and that therefore the Wolhaupter patents cannot cover the defendants' tie plate. This should be an end of the plaintiff's case and a detailed discussion of the Wolhaupter patents, the validity of their claims, and the issue of infringement should be superfluous. For the sake of completeness, however, we shall proceed to discuss these matters. It will appear that under the established rules of interpretation laid down by this and other courts the defendants' tie plate does not infringe any of the Wolhaupter patents and that those patents are each and all invalid if construed to cover defendants' structure, which could infringe no valid patents of their dates.

B. WOLHAUPTER.

TIE PLATE.

No. 538,809. Patented May 7, 18

Fig. 2.

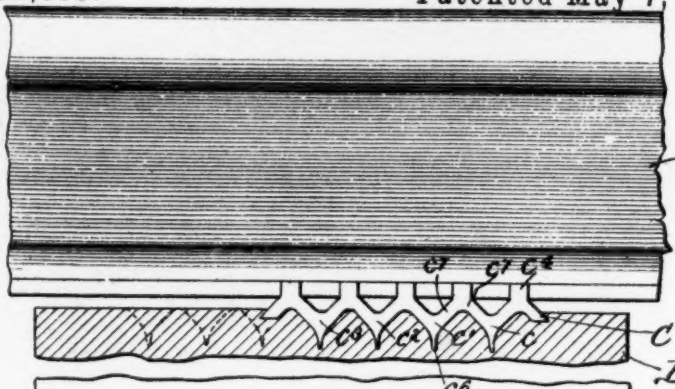


Fig. 1.

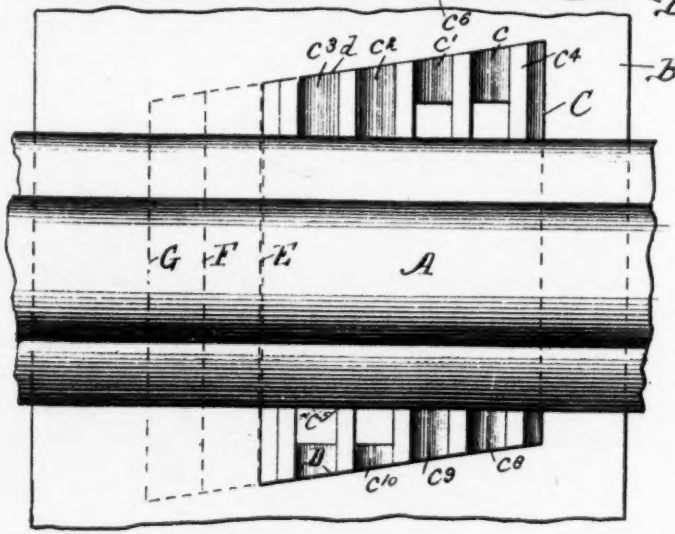
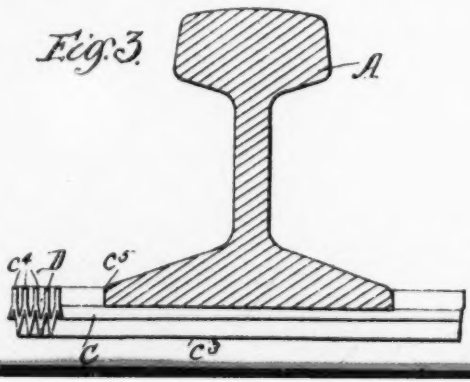


Fig. 3.



THE FIRST WOLHAUPTER PATENT IN SUIT, No. 538,809.

The tie plates which we have been discussing, including the defendants' plate, are primarily of a single type, viz., a flat plate with the additional features of a rail-engaging shoulder and weight-saving channels or grooves on its upper surface and V-shaped across-the-tie ribs on its bottom. The shoulder, channels and ribs are parallel to the rail and transverse to the grain of the tie.

The tie plate of the first Wolhaupter patent in suit (Rec. p. 11) is of an entirely different type. It is a plate made up of a series of angular arches, which at their upper meeting points form ridges on which the bottom of the rail rests and at their lower points of meeting form sharp, deep bottom *flanges* c^s, which enter deeply into the tie, *parallel and not at right angles to its length*, and attach the plate to the tie. On each side of the rail the upper ridges of the plate are provided with short flanges c^4, against which the side of the lower flange of the rail abuts. The rail does not rest *upon* but *against* these flanges. The rail rests upon the tops of the series of arches.

The main characteristic of this plate of the first Wolhaupter patent is that the flanges on the top and on the bottom (which bottom flanges are driven into and *attach* the plate to the tie) are *parallel to the tie and crosswise to the rail.* This characteristic alone places it in a class entirely distinct from that of the defendants' plate and its prototypes of the prior art in which there are bottom ribs, not flanges, at right angles to the tie.

The Wolhaupter patent points out that tie plates like those of the patent, having bottom flanges at right angles to the rail and running lengthwise of the tie, are forced lengthwise of the tie by the rail, and the alleged invention is directed to dealing with this difficulty (which the patent

says was inherent in tie plates of this character), not by providing any means to prevent the spreading movement of the plate and rail, but by so constructing the plate on its under side —

> "that after it has been moved by the lateral pressure of the rail, it, together with the rail, can be easily moved back to the proper position to maintain the gage and be held in that position even more firmly than when originally laid." (Page 1, lines 54–89.)

This construction consists in making the bottom flanges of such length that one after the other they extend from the outside of the rail increasing distances; that is, the second flange c^1 extends beyond the first flange c, the third c^2 beyond the second, etc. Then when the rail and plate have moved outward or laterally, thus lengthening the grooves worn by the flanges, the plate can be taken up and moved sidewise across the tie, and at the same time it and the rail are brought back to their original positions lengthwise of the tie. This is accomplished by placing the second flange c^1 in the indentation previously occupied and worn in the tie by the first flange c, the third flange c^2 in that worn by the second flange c^1, etc.

This feature of the plate of the first Wolhaupter patent in suit is described in that patent as follows: —

> "The operation is as follows: The plate is of course originally engaged to the tie in such a location as that the rail will be in proper position to form the proper gage of track. Each of the flanges c to c^3 will displace enough of the fiber to allow them to enter the face of the tie. After the plate has been in use some time the lateral pressure of the rail will move the plate to a greater or less extent along the length of the tie and the ends d of each flange c to c^3 will compress the fiber in advance of it. Now if the

plate is removed there will be a series of indentations or perforations in the face of the tie made by the flanges c to c^3 and these indentations or perforations will be stepped or on a diagonal line. The plate is now replaced on the tie with the edge E moved to a position shown by dotted lines F. This will bring each flange c to c^3 into the indentation or perforation originally occupied by the flange next adjacent with the exception of the flange c^3 nearest the edge E, this flange making a new indentation for itself. Now if the end d of each flange c to c^3 is brought to a bearing against the indentation made by the next preceding flange and the ends of these flanges are on a diagonal line as compared to the rail flange, the plate will be found to have moved lengthwise of the tie a distance equal to the difference between the length of each plate flange measured from its end to the rail flange. Now as will be seen this movement of the plate lengthwise of the tie will force the rail laterally a corresponding distance, thus restoring the desired gage of the track. If one shifting of the plate is not sufficient to take up the abnormal width of the gage, or if after the plate has been shifted, it again gives way to sufficiently widen the gage the edge E can be shifted to the position shown by the dotted lines G." (Page 2, lines 46–86.)

The defendants' plate has no such organization or capacity as that thus described in the first Wolhaupter patent in suit.

While the 8th claim of the patent, the claim in issue, does not in terms refer to this, the most marked feature of the plate of the first Wolhaupter patent, that feature is of controlling importance in this case, for in considering the patent it must be remembered that the tie plate of the first Wolhaupter patent has this capacity *because its bottom*

flanges are parallel to the tie. It is with such plates only that Wolhaupter was dealing. The fundamental defect which he is trying to cure exists only in a plate which has bottom flanges parallel with the tie for it is such a plate only that is liable to be moved lengthwise of the tie, i. e., laterally of the rail, by the side push on the rail. This permits the fatal "spreading" of the rail which is the cause of many accidents.

Therefore such a plate, viz., one with the flanges on the bottom made at right angles to the rail and lengthwise of the tie, is the *only plate* referred to by Wolhaupter in his specification and claims. His patent is limited to improvements in that form of plate.

The defendants have no such plate. Their tie plate has ribs on the bottom that run crosswise of the tie, and consequently belongs to a class of plates entirely distinct from that of the plate of the first Wolhaupter patent in suit.

DISTINGUISHING DIFFERENCE BETWEEN PLATES WITH PARALLEL-TO-THE-TIE FLANGES AND PLATES WITH ACROSS-THE-TIE-RIBS ADMITTED BY WOLHAUPTER.

Wolhaupter himself in his prior patent, No. 530,738, December 11, 1894 (Rec. p. 1244), states that a plate of the type of the first Wolhaupter patent in suit, having bottom *flanges* parallel to the tie and thereby permitting the lateral "spreading" of the plate and rail, belongs to an entirely different class of tie plate from that of the defendants' tie plate and the tie plates of the prior art, which have bottom *ribs* running across the tie.

In patent No. 530,731, Wolhaupter says (p. 1, line 39) :—

> "Heretofore in the manufacture of this class of plate *two broad styles* or forms of plates have been manufactured, namely: those wherein the *ridges or*

> *engaging devices* on the under side of the plate are adapted to enter the tie *parallel with the grain of the tie* and not to cut the fiber, but merely to separate it on the line of the grain thereof."

(This is the class to which the plates of the Wolhaupter patents in suit belong and to which also belongs the prior Servis plate illustrated at page 85 of the Record and shown and described in the Servis patent No. 294,816, March 11, 1884, Rec. p. 1102.)

We continue the quotation from the Wolhaupter patent No. 530,738 (Rec. p. 1246, line 46) : —

> " and secondly, those in which the engaging devices whereby the plate is engaged to the tie were so arranged as to extend *transversely of the grain of the fiber* and thus cut into and sever the fiber ".

(This type of plate is that of the defendants' plate and of the Wells, the prior Goldie and C. A. C. or Churchward plates referred to above, pp. 12–14.)

Wolhaupter continues (p. 1, lines 51) : —

> **" These two forms are clearly distinct from each other, since each proceeds on an entirely different theory."**

He explains those theories as follows (p. 1, line 53) : —

> " Those plates in which the engaging devices are parallel with the grain of the tie [Wolhaupter and Servis] are manufactured on the theory that it is unadvisable to cut the grain of tie since the tie is thereby weakened, and the grain being cut transversely the moisture is permitted to enter the fiber and thus rot it, while those who prefer the second class [that of the defendants' tie plate and its prototypes, the Wells, Goldie, C. A. C., etc.] assert that the cutting of the

> fiber is a secondary consideration when the fact that *the plate is prevented absolutely from creeping along the tie and thus widening the gage of the road is considered.*"

Here again, as in the first patent in suit, Wolhaupter points out that it was understood in the art that bottom *flanges* parallel with the grain of the tie, which are characteristic of the plates of the patents in suit, do not prevent the plate and rail from spreading, while *ribs* across the tie do prevent it.

Wolhaupter states the advantages of the cross ribs of the other class, to which defendants' plate belongs, saying (p. 1, line 65):—

> "or in other words, the advocates of the transverse engaging devices [such as those of the defendants' plate and its prototypes] that is, those that cut into the grain at right angles or substantially right angles to the grain, base their argument upon the ground that *the plate forms a positive and absolute stop against lateral movement by the rail without depending on the spikes to prevent it*".

We have therefore the statement of Wolhaupter, the patentee of the patents in suit:—

(1) That the plates with bottom *flanges* parallel to the tie, such as are shown in the three patents in suit, were likely to move lengthwise of the tie and permit the rail to spread;

(2) *that such plates belong to an entirely distinct class from those provided with cross bottom ribs, such as the defendants' plate and its prototypes*, and further

(3) that *the principal object of the invention* of Wolhaupter's first patent in suit was to construct his plate so that after having

"been moved by the lateral pressure of the rail" [Wolhaupter's first patent in suit, Rec. p. 12, line 54],

it could be taken up, shifted sidewise and restored to its original position lengthwise of the tie, thereby bringing the rail back to its proper place.

Defendants' alleged infringing tie plate concededly has none of these features. It has not any bottom *flanges* at all, such flanges being thin, deep, sharp, parallel-to-the-tie projections, which *attach* the plate to the tie but do not prevent it from "spreading". It merely has the across-the-tie *ribs* of the prior art as exemplified in the prior Goldie and C. A. C. plates, which ribs are V-shaped and shallow and not sharpened and do not attach the plate to the tie, but do positively prevent it from "spreading". These across-the-tie ribs are not Wolhaupter's bottom *flanges* either in construction, function or in result, and place the defendants' plate, as Wolhaupter himself points out, in an entirely different class from that of the plates of the Wolhaupter patents in suit and outside of the alleged inventions and scope of those patents.

THE ANTI-BUCKLING FUNCTION OF WOLHAUPTER'S FLANGES NOT PRESENT IN DEFENDANTS' PLATE.

A second and characteristic function of the top and bottom across-the-rail flanges of the plate of Wolhaupter's first patent in suit is, as stated in the patent, to give the plate increased resistance to the buckling strains which tend to bend the plate at the edges of the rail parallel thereto. In so arranging his flanges to resist buckling Wolhaupter proceeded on the well-known principle that a corrugated or angled plate is more difficult to bend or buckle than a flat plate. The first Wolhaupter patent in suit states (Rec. p. 12):—

"The invention further contemplates a form of plate provided with top and under flanges which shall be extremely strong in its construction and effective in its designed use." . . . (Page 1, lines 60–64.)

"It will be observed that by the form of plate there is much less opportunity or chance of buckling than with the ordinary flat plate since each point where the rail rests upon the plate is supported and trussed by *metal which is more or less on edge* instead of on its side, thereby forming for each resting point of the rail two girders c^3 joined at the apex by the top flanges c^4 where the rail rests." (Page 1, lines 92–101.)

Wolhaupter's flanges, running across the rail to resist the buckling or bending of the plate, are characteristic features, which the defendants' plate entirely lacks. In that plate the shoulder, the grooves, the rail bearing surfaces and the bottom V-shaped ribs all run parallel to the rail, and they therefore have no tendency whatever to prevent the plate from buckling, because the bending strain comes at the edges of the bottom of the rail and is parallel to the shoulder, grooves and ribs of the tie plate.

The difference between this anti-buckling function of the flanges of the Wolhaupter patents in suit running crosswise of the rail, and the lack of that function in the shoulder, grooves and bottom ribs of the defendants' tie plate running parallel to the rail can be easily appreciated by taking a piece of corrugated paper and trying to bend it across, that is, at right angles to the corrugations. The corrugations then resist the bending strain as do the flanges of the Wolhaupter plate of the first patent in suit. An attempt to bend the piece of corrugated paper parallel to the corrugations will be assisted rather than resisted by the corrugations.

The defendants' tie plate has no flanges running across

the rail, which is the only arrangement of flanges which can resist the buckling strain of the rail. The defendants' tie plate depends upon *the thickness of the metal of the plate itself* at the edges of the rail to prevent buckling. (Storey, Rec. p. 314, Q. 48.) This is precisely the opposite of the "mode of operation" of the plate of Wolhaupter's first patent in suit, which is that of resisting the buckling strain by means of across-the-rail corrugations as in the case of the tie plate of the prior Dunham patent illustrated in our main brief, page 48. (Rec. p. 1169.)

CLAIM 8 OF WOLHAUPTER'S FIRST PATENT IN SUIT NOT INFRINGED.

The claim in issue of this first Wolhaupter patent is as follows (Rec. p. 14):—

> "8. A railway tie plate formed on the under side with devices more or less sharpened adapted to penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests, substantially as described."

This claim specifies a tie plate with two characteristics:

(1) "Devices" on the bottom "more or less sharpened adapted to penetrate and engage the tie". These are the flanges c^6, which run *parallel* to the tie and are more or less *sharpened* to penetrate and engage the tie. See figures of patent (*supra*, p. 35).

(2) "A series of flanges" on the upper side of the plate "on which the rail rests". The *flanges* on top of the plate are specifically the short flanges c^4 against which the rail rests or abuts but on which the rail is not mounted. The rail is mounted on the ridges c^7, which it is inaccurate to call "flanges".

The defendants' plate has neither of these features.

(1) It does not have the "devices more or less sharp-

ened adapted to penetrate and engage the tie" on the bottom of the plate, the function of which is to *secure* the plate to the tie, as plaintiff's practical expert Wallace admits. (Rec. p. 577, X-Q. 175.) The two ribs on the bottom of the defendants' plate are not "sharpened" either "more or less", but are blunt-pointed V shaped ribs exactly like the ribs of the old Goldie commercial plates, which the witnesses agree were not sharpened and did not penetrate the tie in the sense that Wolhaupter's bottom flanges, which are *sharpened*, penetrate the tie and thereby attach the plate to the tie.

Wolhaupter testified (Rec. p. 194):—

> "*X-Q.* 240. How do these flanges on the bottom of 'Complainant's Exhibit No. 15' [the alleged infringing tie plate] compare with the flanges on the bottom of the Goldie type of tie-plate in regard to shape, size and situation relative to the rail?
>
> "*A. They are much the same in size and shape* but my recollection is that they were considerably closer together and more nearer the center of the rail than as shown on this plate 'Exhibit 15'".

That is, the ribs or flanges on the bottoms of the Goldie plates (*supra*, p. 24) were practically of the same size and shape as those on the bottoms of the defendants' alleged infringing plates.

Of the across-the-tie ribs on the bottoms of the Goldie plates Wolhaupter testified in answer to X-Q. 226 (p. 192):

> "*A.* They were wedge shaped *but hardly could be called sharpened,* they were really of triangular shape but of a form I should say like an equilateral triangle."

In answer to X-Q. 230 he testified (Rec. p. 193):—

> "*A. These flanges were not sharp enough to cut the*

fibre but merely depressed it and then abraded it and by such abrasion formed pockets for themselves on the top surface of the tie, and *the plate in no sense became part and parcel of the tie as the Wolhaupter and Servis plates* of which we have been talking."

In answer to X-Q. 233 he said (Rec. p. 193): —

"*A.* As explained above these flanges were so small with such a rough edge and dull edge that they rather abraded the wood and cut or ground a way for themselves into the tie."

The defendants' bottom ribs, which are exactly those of the 1892 Goldie plates, therefore do not perform the functions and are not the equivalent of Wolhaupter's bottom flanges, concerning which the *plaintiff's* expert Miller said (Rec. p. 645): —

"The projecting devices on the bottom of the plate, more or less sharpened, perform the function of and provide additional means for *attaching* the plate to the tie, and being more or less sharpened they readily penetrate the tie by the weight of the traffic."

The defendants' bottom ribs perform no such function. On the other hand the defendants' bottom ribs perform the function of completely preventing the lateral movement of the plate and rail, which is not and cannot be performed by the Wolhaupter plate.

Faulkner, manager of the tie and timber department of the Atchison Railway System, testified (p. 285): —

"I believe when the ribs run across the grain parallel with the rail that they hold the track in gauge better than when they run the other way."

The first Wolhaupter patent in suit No. 538,809 (Rec. p. 11), and the prior Wolhaupter patent No. 530,738 (Rec. p. 1244) admit that Wolhaupter's bottom *flanges* will not, and that across-the-tie *ribs* like defendants' will, positively prevent the plate and the rail from spreading (*supra*, pp. 36, 39).

The defendants' bottom ribs, therefore, are not the same as, or the equivalent for, the bottom flanges of the plate of the Wolhaupter first patent in suit. They do not attach the plate to the tie. They do not penetrate the tie but merely abrade grooves in it. They are not "more or less sharpened", as required by the eighth claim of the first Wolhaupter patent in suit. But they positively prevent the plate and the rail from spreading by an entirely different mode of operation, namely, the cross grip of the bottom ribs against the grain of the tie. Therefore the defendants' tie plate does not embody that element of claim 8 of the first Wolhaupter patent in suit, which is specified as "devices more or less *sharpened* adapted to *penetrate* and engage the tie."

If, regardless of the fact that defendants' bottom ribs do not perform the functions of Wolhaupter's sharpened flanges, they may be said to be "sharpened" as a matter of words, it follows that every bottom projection may likewise be called "sharpened", as defendants' expert Carter points out (Rec. pp. 351–358), and that element of Wolhaupter's claim becomes absolutely meaningless.

In other words, the "railway tie plate" of the claim must be one to which the alleged improvements set out in the patent are applicable and in connection with which they can be realized. The Wolhaupter improvements of the first patent in suit are applicable to and can be realized only in a tie plate in which the top and bottom flanges are *parallel* to the tie and at right angles to the rail. Claim 8, therefore, must be limited to this form of tie

plate and cannot be construed so as to cover defendants' tie plate in which exactly the reverse arrangement is employed, to which none of the Wolhaupter alleged improvements can possibly be applied, and which does not perform the functions of those improvements.

In the patent law a thing is not the same as or the equivalent of another, and a defendants' device is not an infringement of a patent unless it performs the same functions in substantially the same way.

AUTHORITIES THAT A DEVICE THAT DOES NOT PERFORM THE FUNCTIONS OF THAT OF THE PATENT IS NOT AN INFRINGEMENT.

In *Machine Co.* v. *Murphy*, 97 U. S. 120, this Court stated the law (p. 125) : —

> " Except where form is of the essence of the invention, it has but little weight in the decision of such an issue, the correct rule being that, in determining the question of infringement, the court or jury, as the case may be, are not to judge about similarities or differences by the names of things, but are to look at the machines or their several devices or elements in the light of what they do, or what office or function they perform, and how they perform it, and to find that one thing is substantially the same as another, if it performs substantially the same function in substantially the same way to obtain the same result, always bearing in mind that devices in a patented machine are different in the sense of the patent law when they perform different functions or in a difierent way, or produce substantially a different result."

In *Bates* v. *Coe*, 98 U. S. 31, this Court said (p. 42) : —

> " Devices in one machine may be called by the same name as those contained in another, and yet

> they may be quite unlike, in the sense of the patent law, in a case where those in one of the machines perform different functions from those in the other. In determining about similarities and differences, courts of justice are not governed merely by the names of things; but they look at the machines and their devices in the light of what they do, or what office or function they perform, and how they perform it, and find that a thing is substantially the same as another, if it performs substantially the same function or office in substantially the same way to obtain substantially the same result; and that devices are substantially different when they perform different duties in a substantially different way, or produce substantially a different result."

In *Thomson-Houston El. Co.* v. *Western El. Co.*, 72 Fed. 530, the Court of Appeals for the Seventh Circuit said (p. 531):—

> "In determining whether the invention described in one patent differs from that described in another, evidence may be heard — and, in a difficult case, manifestly ought to be heard — concerning the construction and actual operation of each. *Specifications and claims are necessary, but inventions consist in things, not in words.*"

There are many other cases in which this established principle of patent law has been stated, which are unnecessary to refer to.

DEFENDANTS' PLATE HAS NO "SERIES OF FLANGES ON WHICH THE RAIL RESTS" AS SPECIFIED IN CLAIM 8 OF THE FIRST WOLHAUPTER PATENT IN SUIT.

Claim 8 of the first Wolhaupter patent in suit specifies that the plate is formed "on its upper side with a *series of flanges* on which the rail rests".

As we have pointed out, there are in fact no *flanges* on the top of the Wolhaupter plate of the first patent in suit on which the rail rests. The only top flanges of the patent are the parts marked "c^4" against which the rail abuts. The ridges marked "c^2" between the hollows are not flanges. The claim does not read correctly upon the plate described and shown in the specification.

"A series of flanges" c^4, against which the rail rests or abuts, has no counterpart in the defendants' tie plate. In that plate the rail abuts against a continuous shoulder, as in the prior art plates (*supra*, p. 13), and not against a "series of flanges". For this reason the defendants' tie plate has no "series of flanges on the upper surface of the plate", which corresponds in function and mode of operation to the series of flanges specified in Wolhaupter's claim 8.

However, if the specification and drawings of the Wolhaupter patent be ignored, and plaintiff's contention be accepted that the "series of flanges" referred to in the claim are the tops of the arches c^2, on which the rail rests, it is clear that even with this forced construction of the claim the defendants' tie plate does not have such "flanges".

These supposed "flanges" of the Wolhaupter plate run across the rail at right angles to it, and they therefore perform the function of resisting the buckling of the plate, as the patent states (*supra*, p. 41). In the defendants' tie plate, on the contrary, the rail-bearing surfaces,

which the plaintiff calls "flanges", are not flanges at all but merely wide portions of the upper surface of the plate, separated by shallow weight-saving channels which run parallel to the rail. They are the real main body of the plate. *In no sense are they made up of "metal more or less in upright position"* as the Wolhaupter patent (Rec. p. 13) describes the "flanges" of that patent (specification, p. 2, line, 17); they are the bearing parts of the top surface of the defendants' plate. The fact that they are separated by broad, shallow channels does not make them "flanges" or ridges, or give them any resemblance in function, or in other respects to the differently arranged so-called "flanges" of the plate of the first Wolhaupter patent in suit, which resist the buckling strain of the rail because they run across the rail, as we have pointed out. These rail-supporting parts of the defendants' tie plate do not perform the functions of the flanges of the plate of the first Wolhaupter patent in suit, and therefore are not the same as or the equivalent of the supposed cross-rail "flanges" of the tie plate of the Wolhaupter first patent in suit as the authorities cited (*supra*, p. 47) show.

The plaintiff contends that the rail-supporting surfaces of the defendants' plate should be regarded as "flanges", because it says that the broad, shallow, weight-saving channels of defendants' plate, which plaintiff says have some function as receptacles for the sand and grit that might collect on the rail-supporting surfaces of the plate, necessarily involve raised portions, one on each side of each channel, as a valley involves hills.

We believe that this Court will find that this supposed function of the grooves is not of the least consequence (Storey, Rec. p. 318, Q. 84), and that its alleged merits have been grossly exaggerated by the plaintiff in an effort to attribute some advantage to what it has been pleased to call "a corrugated tie plate". There is no evidence that a single tie plate of *the millions in use without such grooves*

has ever been removed because it was actually worn by the abrasion of the sand on its rail-supporting surface. Plaintiff's witness Wallace admits that the "rate of abrasion is slow" and that the Sacramento, a flat top plate, "if made a little thicker would last indefinitely". (Rec. p. 575, X-Q. 149.)

Even if this drainage function of the grooves were a matter of any importance, that would not aid the plaintiff, because the grooves, such as the defendants employ, were taken with their function specifically from the Wells patent No. 203,570 (Rec. p. 1088), and other patents and devices of the art prior to Wolhaupter, as above pointed out (*supra*, p. 18), and not from the tie plate of the first Wolhaupter patent in suit. Grooves as receptacles for sand as well as to save material and weight were not a novel feature with Wolhaupter.

We therefore submit that the defendants' tie plate has neither of the features which are characteristic of the tie plate specified in claim 8 of the Wolhaupter patent in suit, No. 538,809. It has not the "devices more or less sharpened adapted to penetrate and engage the tie" on the under surface of the plate. It has not "a series of flanges on which the rail rests" on the upper surface of the plate, and its tie plate is not "substantially as described" in the specification and drawings of the Wolhaupter patent.

It is therefore not an infringement.

INFRINGEMENT OF CLAIM 8 OF THE FIRST WOLHAUPTER PATENT IN SUIT FORBIDDEN BY THE PRIOR ART.

The plaintiff in order to read claim 8 of the first Wolhaupter patent in suit on the defendants' tie plate is obliged to disregard what is shown and described in the specification and drawings of that patent and to overlook differences of the greatest significance between the tie plate of

that patent and the defendants' tie plate. Such a broad and vague construction of Wolhaupter's claim is not permissible.

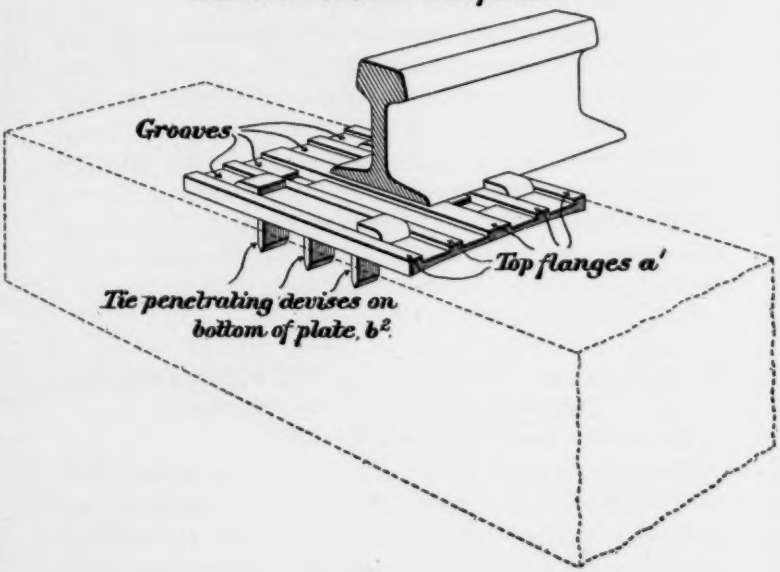
If the claim is to be so construed it is, we submit, readable much more exactly on the tie plates of the prior art than it is upon the defendants' tie plate.

In this connection we need consider but three prior patents, viz., that to Wilson, No. 522,867, July 10, 1894; that to Goldie, No. 485,030, October 25, 1892, and that to Dockstader, No. 462,399, November 3, 1891.

The Wilson patent (Rec. p. 1229) describes a tie plate A, *which on its upper surface has five across-the-rail flanges* a^1, as well shown in Figs. 1 and 3, whereby *four grooves* are

Wilson Tie Plate

Patent No. 522,867. –Rec. p. 1229



formed between the flanges on the top surface of the plate. *The rail rests on top of these flanges.* The flanges a^1, moreover, as in the Wolhaupter patent, run crosswise of the rail, and thereby perform the same function, as in the plate of the Wolhaupter patent, of resisting the buckling strain of the rail upon the plate. Of this the Wilson patent states: —

> "The plate A is formed . . . with longitudinal ribs on its upper surface *to prevent buckling* of the plate under the weight of the rail and passing trains, and these may consist of a series of narrow ribs a^1 of substantially equal width." (Wilson, p. 1, lines 36–41.)

The grooves, as in the Wolhaupter patent, would likewise perform the function of receptacles for sand and grit.

The Wilson patent shows in two of the grooves in the top of the plate "guard devices" B which are strips having rail abutting heads on their tops and spikes b^2 on their bottoms, which spikes b^2 pass through holes a^2 in the plate and thereby attach the plate to the tie.

It is immaterial that the Wilson plate A and guard devices B are made in separate pieces. When the plate is in place they are united and form one structure. It could not amount to invention to unite these devices or make them all in one piece.

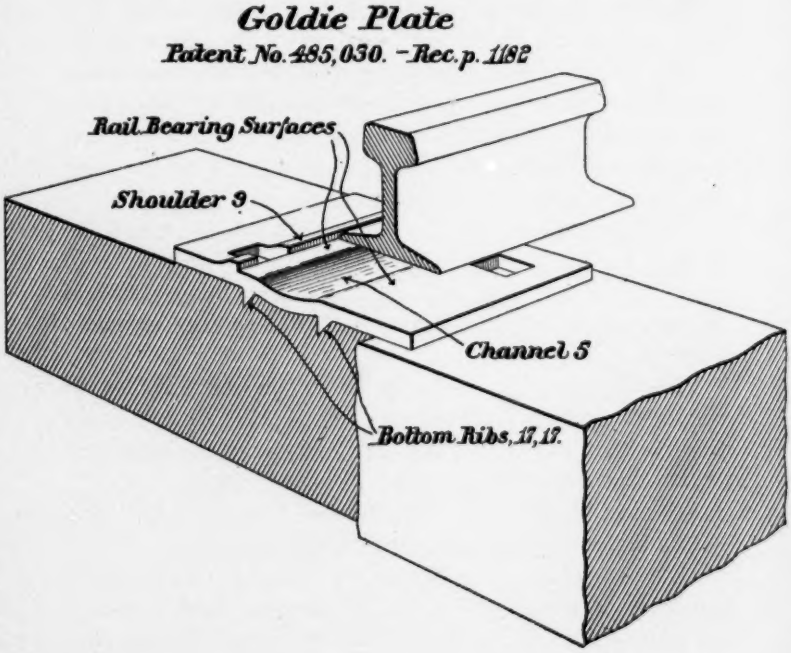
The Wilson plate combines every feature specified in claim 8 of the first Wolhaupter patent in suit. It is "a railway tie plate formed on the under side with devices more or less sharpened adapted to penetrate and engage the tie". These are the spikes b^2. It is formed "on its upper side with a series of flanges on which the rail rests". These are the flanges a^1. The Wilson plate is more nearly "substantially as described" in the Wolhaupter patent than is the defendants' tie plate for Wilson's upper flanges and grooves are parallel to the tie and at right angles to the

rail as in Wolhaupter's plate which is not true of the defendants' plate.

We submit that if the Wolhaupter claim should be so broadly and loosely construed as to cover the defendants' tie plate, it is likewise readable upon the Wilson plate and is therefore anticipated and invalid.

The Goldie patent No. 485,030 (Rec. p. 1182) likewise shows and describes a tie plate which anticipates claim 8 of the first Wolhaupter patent in suit if that claim is so broadly construed as to be infringed by the defendants' tie plate.

The plate of the Goldie patent has on its under surface "devices more or less sharpened adapted to penetrate and



engage the tie", if that description is applicable to *ribs* across the tie. They are the ribs 17, 17 parallel to the rail as are the defendants' ribs, and, as shown in the Goldie patent, they are more nearly "sharpened" than are the corresponding ribs of the defendants' tie plate.

The Goldie plate on its upper side has two rail-supporting surfaces 7, 7, which are just as much "a series of flanges on which the rail rests", as are the corresponding upper surfaces of the defendants' tie plate. Between these rail-supporting surfaces or "flanges" is a distinct depressed portion 4 forming a transverse groove 5 on the upper side of the tie plate, which would act as a receptacle for sand to the same extent as would the grooves in the defendants' tie plate. Of this feature the Goldie patent states:—

> "3 is a tie plate having a depressed central portion 4 beneath the rail and provided with a transverse concavity or depression 5 on its upper side." (P. 1, lines 72–76.)

Goldie plates (sometimes called Glendon plates), exactly as described in this patent, were manufactured in substantial quantities in 1892, and thereabouts, and went into successful commercial use. (Bell, p. 115; Faulkner, p. 204, Q. 42; p. 205, Q. 51, 57; Dyer, p. 434, Q. 12–15; Zimmerman, p. 530; Evans, p. 538, Q. 21; Ambler, p. 542; Cullen, p. 547; Goldie, p. 794, Q. 6; Schleiter, p. 819, Q. 36.) See our main brief (p. 58).

The groove or concavity in these Goldie plates was about one-eighth of an inch deep, as Ambler, who had charge of the rolling of these plates at the mill of Dilworth, Porter & Company, testified. (Rec. p. 542, Q. 13.)

Dyer, while in the employ of the Atchison, Topeka & Santa Fe Railroad, was division superintendent of the division extending between El Paso, Texas, and Deming, New

Mexico. He installed about one thousand of these Goldie plates at —

> "say eight or ten miles west of Las Vegas, New Mexico, where we had trouble in holding our track to gauge on curves". (Rec. p. 434, Q. 12.)

The plates had —

> "a concave space through the center". (Rec. p. 434, Q. 13.)

He testified that this was —

> *"a space for sand and dirt to roll out from under the rail"*. (Rec. p. 435, Q. 15.)

He testified that the plates —

> "were considered very satisfactory and I didn't perceive any evidence of spreading". (Rec. p. 435, Q. 27.)

It is impossible to doubt that the groove or cavity in the Goldie 1892 cross rib plates was just as much a receptacle for sand which might collect on the rail-bearing surfaces or "flanges" of that plate as are the grooves in the defendants' alleged infringing tie plate.

The plaintiff's contention that the cavity or groove in the top of the Goldie tie plate would not be effective as a sand receptacle because many years ago rails were made with round bottoms which would partially occupy the cavity in the top surface of the Goldie plate, is absolutely unfounded. (See Dyer's testimony above quoted.)

Mr. Wallace, the plaintiff's witness, admits that "since some time in the 80's" rails "have had flat bottoms" (Rec. p. 577, X-Q. 171), so that in 1892 the cavity in the top of the Goldie plates would not have been even partially filled by the rail.

Goldie, also called by the plaintiff, admitted (Rec. p. 805) : —

> "*X-Q.* 99. But when the plate and rail in this device were in track, it was intended to be, and there was, a space between the bottom of the rail and the bottom of the cavity ?
>
> *A. That is correct.*
>
> *X-Q.* 100. And this shows both in the drawings and the plates as manufactured, of this kind ?
>
> *A.* It does."

He further admitted that at the time the Goldie top-cavity bottom-rib plate was designed and manufactured, that is, in 1892, some of the rails used by railroads were practically flat on the bottom and any convexity of the rails at that time was certainly not as great as the depth of the cavity employed in the Goldie plate. (Rec. p. 814, RX-Q. 181 to RX-Q. 183.)

The Goldie patent No. 485,030 (Rec. p. 1182) and the commercial manufacture and practical use of the Goldie plates, all being prior to the first Wolhaupter patent in suit, prohibit any construction of claim 8 of that patent which would read it upon the defendants' tie plate.

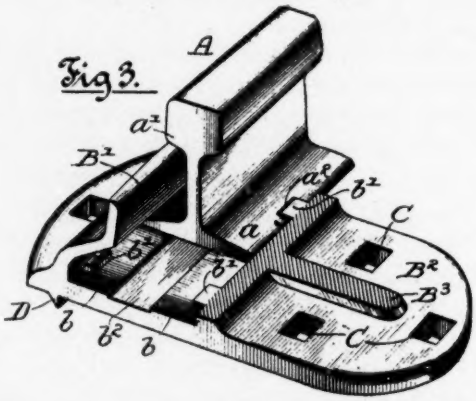
As we have pointed out, this claim 8 of the first Wolhaupter patent in suit, when properly read as defining the tie plate shown and described in the specification of that patent, calls for more or less sharpened devices on the bottom of the plate adapted to *penetrate* and *engage* the tie and therefore running *parallel* to the grain of the tie, and a series of flanges on the top of the plate, which have the function of preventing the buckling of the plate and therefore run across the rail, as described in the Wolhaupter specification. The claim does not properly describe a tie plate such as that of the defendants or of the Goldie patent No. 485,030, in which the bottom across-the-

tie ribs and upper rail-supporting surfaces run parallel with, not across, the rail, and therefore do not perform the functions of the bottom flanges and top flanges of the Wolhaupter plate.

But if claim 8 is to be divorced from the specification of the Wolhaupter patent and improperly construed, as the plaintiff contends, so as to read upon the defendants' tie plate, that construction would surely render it anticipated by the Goldie patent and tie plates of 1892 and therefore invalid.

The Dockstader patent No. 462,399 (Rec. p. 1158), to which reference has already been made (*supra*, p. 22) likewise anticipates claim 8 of the first Wolhaupter patent in suit if it be misconstrued to read upon the defendants' tie plate.

Fig. 3 of Dockstader Patent.



In the Dockstader patent (see Fig. 3), the plate is provided with ribs D on its under side which are shown as more "sharpened" than the ribs on the bottom of the defendants' plate. The Dockstader plate on its top is provided with a rail-abutting shoulder and with rail-supporting

surfaces *b, b* having between them a groove b^2. *These are the structural characteristics of the defendants' tie plate.* If claim 8 of the first Wolhaupter patent be so broadly construed as to cover the defendants' tie plate, it would likewise cover the Dockstader device and be anticipated and invalid.

It is immaterial that in the Dockstader device there are the additional parts B^1 B^1 B^2 which support the upper part of the rail A. It would require no invention to remove those parts. It is settled by the decisions of this Court that the mere removal of parts of a device without altering the functions of the remaining parts does not amount to invention.

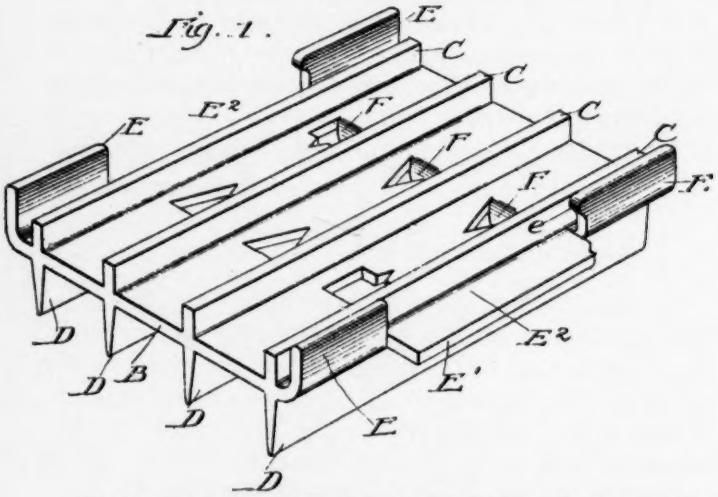
Richards v. *Chase Elevator Co.*, 159 U. S. 477, 486.
Stow v. *Chicago*, 3 Bann. & Ard. 91; Affirmed 104 U. S. 597.
Magin v. *Karle*, 150 U. S. 387.

We therefore submit that the defendants' tie plate is in no respect the tie plate defined by claim 8 of the first Wolhaupter patent in suit. It has no features which correspond to the features of that plate either in construction, mode of operation, or function. The claim cannot be construed to cover the defendants' tie plate without doing violence to the specification and description of the Wolhaupter patent, and without so broadening it as to render it anticipated by the prior art and therefore invalid.

SECOND WOLHAUPTER PATENT IN SUIT, No. 691,332.

The second Wolhaupter patent in suit (Rec. p. 15) describes a tie plate which, except that its flanges are not "stepped", is of the same type as the tie plate of the first Wolhaupter patent in suit, on which it may be regarded as a technical "improvement".

Fig. 1 of Wolhaupter Second Patent in Suit.



This Wolhaupter plate has on its under side flanges D, D directly beneath the upper flanges C, C; both sets of flanges run across the rail and parallel to the length of the tie. The flanges D, D enter the tie parallel to its grain and become embedded therein.

The object and function of arranging the tie-engaging flanges D, D directly beneath the transverse rail-supporting flanges is to increase the resistance of the plate against buckling. The patent states:—

"My invention has for its object the production of

> a tie-plate which while incorporating this feature of flanges on the upper side for sustaining the rail will have the lower side so arranged and disposed that *there is the least liability of the plate buckling.*" (P. 1, lines 20–26.)

Obviously, this arrangement of upper and lower flanges only assists in preventing buckling when *the flanges run across the rail* and parallel with the tie (as is not the case with defendants' plate), because the buckling strain of the rail tends to bend the plate along the edges of the rail bottom. There is no buckling strain of the plate in the direction of the length of the rail because in that direction the entire length of the plate is held down by the rail. The patentee, Wolhaupter, had this very clearly in mind for he further stated in this second patent in suit: —

> "To this end, therefore, the invention primarily consists in the provision on the upper side of a tie-plate of one or more flanges or projections for sustaining the rail and on the under side flanges for *entering the tie parallel with the grain thereof*, the flanges on the lower side being located directly or substantially beneath those on the upper side." (P. 1, lines 27–35.)

The plate is also provided on its upper side with four short flanges E, E, against the ends of which the base of the rail abuts.

The defendants' tie plate has no resemblance to this Wolhaupter plate. It has *no flanges across the rail* nor any rail-supporting flanges either on its top or on its bottom, which prevent buckling. Its three rail-supporting surfaces are all parallel to the rail, and therefore, even if they may be mistermed "flanges", they do not resist the tendency of the plate to buckle. In fact, as already shown (*supra*, p. 49) defendants' plate has no top "flanges".

Its broad rail-bearing surfaces are the real body of the plate, not flanges.

The defendants' plate has no bottom "flanges". It has two shallow V-shaped ribs, which are parallel to the rail and therefore do not resist the buckling strain.

The shoulder of the defendants' tie plate against which the rail abuts is also parallel to the rail and is entirely different in construction from the flanges E, E of the plate of the second Wolhaupter patent in suit, against the ends of which the rail abuts. Defendants' shoulder being parallel to the rail does not resist buckling.

The fact that the defendants' bottom ribs happen to be underneath the two wide side rail-supporting surfaces involves no resemblance between the defendants' plate and that of the second Wolhaupter patent in suit (in which the bottom narrow flanges D are of the same width as and just beneath the narrow top flanges C), because the arrangement in the defendants' plate does not perform the function and therefore is not the same as or an equivalent of the arrangement of the upper and lower flanges of the plate of the Wolhaupter patent in suit.

The defendants' in placing their bottom ribs beneath the broad rail-supporting surfaces have merely followed the Goldie patent No. 485,030 (Rec. p. 1182; *supra*, p. 54), in which the rail-engaging ribs 17, 17 are directly under the rail-supporting surfaces 7, 7, the purpose and result being not to prevent or resist buckling of the plate, but to have the rail bear down directly on top of the ribs to press them into the surface of the tie. The defendants' tie plate has copied none of the features of the tie plate of the second Wolhaupter patent in suit.

THE CLAIMS IN ISSUE OF THE SECOND WOLHAUPTER PATENT IN SUIT ARE NOT INFRINGED.

The three claims in issue of this second Wolhaupter patent in suit are Nos. 1, 2 and 3, as follows: —

> "1. A railway-tie plate provided on its upper side with one or more flanges on which the rail may rest or by which it is directly sustained and on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, substantially as described.
>
> "2. A railway-tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained and on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter and sharpened to permit them to readily enter the tie, substantially as described.
>
> "3. A railway-tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained, on the under side with one or more sharpened tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, and on the upper side with an additional flange or flanges extending above the plane of the rail-sustaining flanges and adapted to receive the lateral thrust of the rail, substantially as described."

These claims define the tie plate described in the specification and shown in the drawings of the Wolhaupter patent, which has upper and lower *flanges of equal width transverse to the rail* and parallel with the tie, arranged as specified in the claims, that is, with the lower flanges, *in their entirety*, directly beneath the upper flanges in order to resist buckling.

As we have pointed out, the defendants' tie plate does not have this construction and is therefore not an infringement of any one of these three claims.

Here again, as in the case of claim 8 of the first Wolhaupter patent (*supra*, p. 43), the organization of the "railway tie plate" described by Wolhaupter necessarily requires that the plate of the claims shall have the characteristic capacities essential to bring about the alleged improvements of this second patent in suit. Any tie plate to be within the claims must therefore have its flanges at right angles to the rail and parallel to the length of the tie. This alone excludes the defendants' tie plate from the claims.

If these claims are read without regard to the tie plate shown and described in this Wolhaupter patent, of which they are by law definitions, they are as fully met by the prior art as they are descriptive of the defendants' tie plate, and therefore such a construction of these claims is impossible.

The Goldie patent No. 485,030 of 1892 (Rec. p. 1182, *supra*, p. 24) shows a tie plate which has, exactly as has the defendants' tie plate, rail-supporting surfaces 7, 7 (improperly called "flanges" by the plaintiff) and lower tie-engaging ribs 17, 17 (which are not "flanges" in the sense of the plaintiff's patents), and *these bottom ribs are directly under and parallel to the rail-supporting surfaces ("flanges") 7, 7 on its upper surface.* It is also provided with a rail-abutting shoulder 9, exactly as in the defendants' tie plate. Hence any construction of the claims in issue of the second Wolhaupter patent in suit, which would read them upon the defendants' tie plate, would render them also anticipated by the Goldie patent and therefore invalid.

The Wells patent No. 203,570 (Rec. p. 1088, *supra*, p. 19) shows a rail-supporting device having rail-supporting surfaces F, C, F, exactly as in the defendants' tie plate.

Figs. 5, 6 and 7 of Third Wolhaupter Patent.

Fig. 5

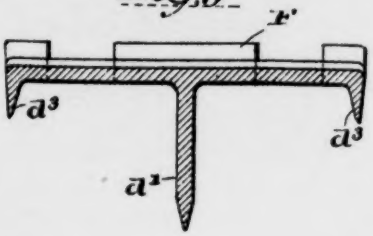


Fig. 6

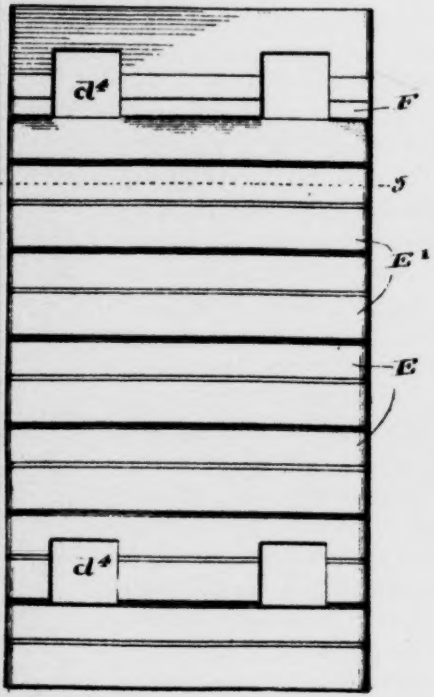
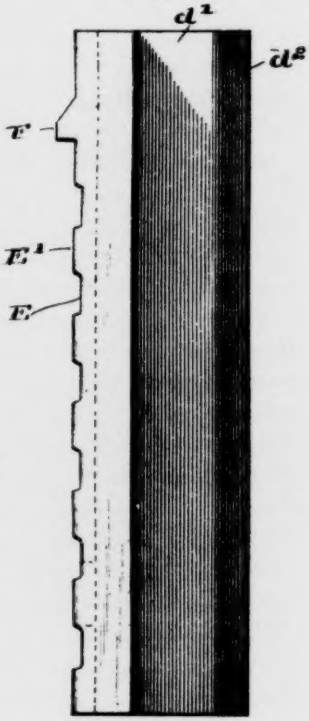


Fig. 7



It has a bottom projection, flange or rib E directly beneath the center upper flange C, and it has a rail-abutting shoulder D on its upper surface. The claims in issue of the Wolhaupter patent in suit read upon the device of the Wells patent as well as they do upon the defendants' tie plate.

We submit that there was no invention whatever in the alleged improvement set forth in this second Wolhaupter patent. At most it was merely locating the under flanges directly beneath the upper flanges of a plate of the Wolhaupter type, that is, where the flanges are real flanges and run crosswise of the rail and parallel to the grain of the tie. Such mere relocation and rearrangement of the flanges in order to resist buckling strain was an obvious mechanical expedient and fully within the capacity of the ordinary mechanic skilled in the art.

THE THIRD WOLHAUPTER PATENT, No. 721,644.

This patent (Rec. p. 18) shows and describes a tie plate made from an old rail. The rail is cut, as shown in Fig. 1, and the base portion and the web are then rolled and cut to form a tie plate. The web B of the rail becomes a very deep central bottom flange d^1. (See Fig. 5.) Side flanges d^2, d^3 are made by turning down the metal on the edges of the plate. These three bottom flanges are driven into the tie *parallel to its grain* and at right angles to the rail as are the bottom flanges of the tie plates of the two prior Wolhaupter patents in suit. The Wolhaupter patents are all of the same type in this respect and radically different from the defendants' tie plate.

The tie plate of the third Wolhaupter patent is then cut across its upper surface to form a series of rail-supporting bearings E^1 and grooves E. These grooves could not be made by rolling, because they are at right angles to the bottom flanges, and to the length of the rail from which the tie plates are made. Only grooves parallel to the

length of that rail could be made by rolling. The top of the plate is also shown as provided with a rail-abutting shoulder F. No explanation is given as to how this rail-abutting shoulder is to be formed above the original upper surface of the old rail.

It would therefore be practically impossible to make this tie plate by rolling from part of an old rail, as described in the patent. There is no pretence that such tie plates have ever been made.

The claims in issue, Nos. 7 and 9, are construed by the plaintiff to cover the trivial modification of making the grooves or channels run *across* the plate, that is, transverse to the tie and parallel to the rail, and to succeed plaintiff must satisfy the court that the claims are to be so construed as to cover any tie plate in which this modification appears. Such a construction would be absurd in view of the prior art. These claims are as follows:—

> "7. A tie plate provided on its rail-supporting surface with transverse grooves or channels, and at one margin of said supporting-surface with a transverse rail-abutting shoulder."
>
> "9. A tie-plate provided in its rail-supporting surface with transverse grooves or channels, reaching to the edge of the plate, and at one margin of said surface a transverse rail-abutting shoulder."

The patent does not state that there is any advantage in making the grooves "transverse" nor is there any.

Even apart from the fact that there could not possibly be invention in forming grooves or channels in the upper surface of the tie plate parallel to the rail, as compared with such grooves or channels parallel to the tie, as shown in the two former Wolhaupter patents in suit, the claims are directly anticipated by the prior Wolhaupter patent No. 691,037 (Rec. p. 1354); the Wells patent No.

203,570 (Rec. p. 1088, *supra,* p. 19); the Goldie patent No. 485,030 (Rec. p. 1182, *supra,* p. 24), and the Dockstader patent No. 462,399 (Rec. p. 1158, *supra,* p. 23).

The *Wolhaupter patent* No. 691,037 (Rec. p. 1354), is a part of the prior art because it was issued January 14, 1902, before the third Wolhaupter patent in suit was applied for, March 31, 1902.

Figs. 11 and 12 of Wolhaupter Patent No. 691,037.

Fig 11

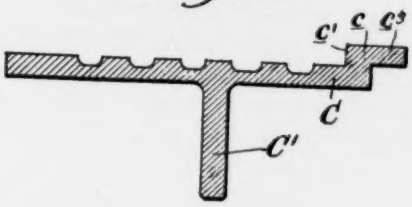
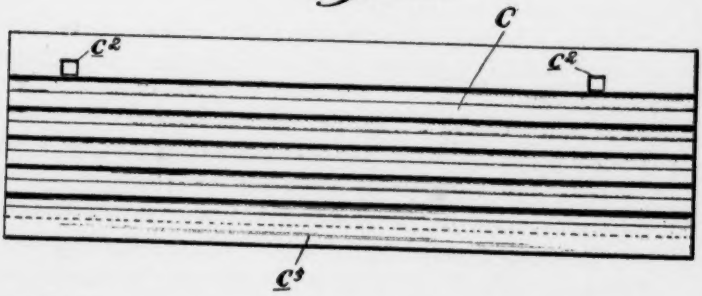


Fig 12



The plate shown in Figs. 11 and 12 of patent No. 691,-037 absolutely anticipates the above quoted claims in issue. The " transverse grooves or channels " in the rail-supporting surface of the plate running across the entire

plate parallel to the rail are clearly shown in those figures and the ribs between them are described at page 2, lines 94–98, of the specification. The "transverse rail-abutting shoulder" is marked c^1, Fig. 11, and is described at page 1, lines 73–78, of the specification.

In the *Wells patent* (Rec. p. 1088, *supra*, p. 19) the rail-supporting device is provided on its upper surface with two grooves B, B parallel to the rail and transverse to the tie, and with a rail-abutting shoulder D, exactly as in the defendants' tie plate, so that any construction of the claims of this third Wolhaupter patent in suit that would fit them upon the defendants' tie plate would be anticipated by the Wells patent (*supra*, p. 19).

The Goldie patent No. 485,030 (Rec. p. 1182, *supra*, p. 24) likewise shows a groove 5 on the upper surface of the plate running parallel to the rail (one groove is obviously the equivalent of two or more) and the rail-abutting shoulder 9 also parallel to the rail (*supra*, p. 24).

The Dockstader patent No. 462,399 (Rec. p. 1158, *supra*, p. 23) also shows a central groove b^2 in the upper surface of the plate and a rail-abutting shoulder, both parallel to the rail (*supra*, p. 23).

We therefore submit that this third Wolhaupter patent in suit is clearly invalid for lack of invention and because anticipated.

COMMERCIAL SUCCESS NOT ATTRIBUTABLE TO ANY OF WOLHAUPTER PATENTS IN SUIT.

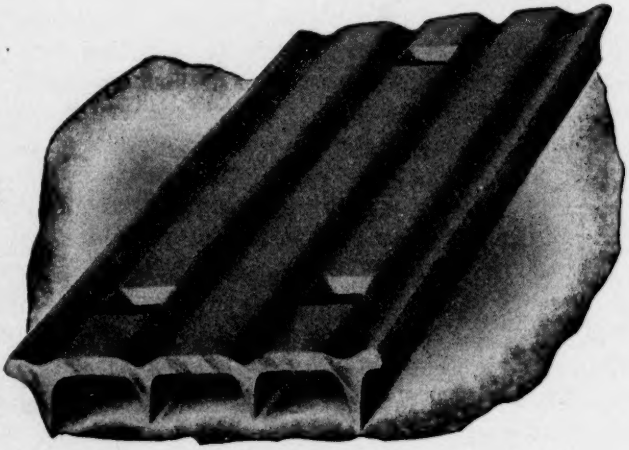
Lack of patentable invention in the Wolhaupter patents in suit is so palpably evident and it is so clear that it is impossible to find such similarities between the several tie plates of those patents and the defendants' tie plate as to justify the charge of infringement, without construing them so as to be met by the tie plates of the prior art, that the plaintiff has been forced to attempt to support its

contentions of validity and infringement by assertions that "Wolhaupter plates" have been a great commercial success. These assertions are not justified. They amount to an attempt to obscure the plain facts of this case by calling every tie plate having a corrugated top a "Wolhaupter plate", regardless of whether those corrugations run parallel to or across the rail, and regardless of whether or not those so-called "Wolhaupter plates" have any of the other features or the alleged advantages of the plates of the Wolhaupter patents in suit. This is misleading.

The record shows that there has never been a tie plate put into commercial use made in accordance with the description and drawings of any one of the Wolhaupter patents. The plaintiff makes no assertion to this effect with reference to the second and third Wolhaupter patents in suit.

The record also shows that Mr. Storey designed the defendants' tie plate without any assistance from Wolhaupter, and that the defendants were the first to introduce and put into use that form of tie plate which the plaintiff later imitated (*supra*, p. 7).

As to the first Wolhaupter patent in suit, the plaintiff claims that it has made and sold a number of plates, the record does not disclose how many, of the types illustrated in the drawings on pages 83 and 84 of the Record and marked "Exhibit No. 24" and "Exhibit No. 25". The plates of these exhibits are substantially identical. To illustrate them, we reproduce No. 24 on the next page. These so-called "Wolhaupter plates" were being put out by the plaintiff in 1898, as were also other forms of plates. (Bell, Rec. p. 82, Q. 12.) Their manufacture ceased many years ago.



"Exhibit No. 24," Illustration Wolhaupter Tie-Plate.
(A comparatively small number made twelve years ago.)

We submit that these plates are not provided with "flanges" on their upper surfaces. The plates are substantially of the same thickness throughout and are not provided with any upstanding ridges or projections that can properly be called "flanges" on which the rail rests. They do not have any short flanges against the ends of which the rail abuts, as in the Wolhaupter first patent in suit. They have no rail-abutting bearing at all. Hence there is nothing to take the thrust of the rail except the necks of the spikes. Their bottom flanges are not "stepped", but are of the same length. These plates are certainly not the plates shown and described in the first Wol-

haupter patent in suit, and it would take an unreasonably liberal interpretation of the claims of that patent to include these plates within them.

The plaintiff's effort to avoid a comparison of the specific plates (Exhibits Nos. 24 and 25, pp. 83, 84 of the Record) with the Wolhaupter patent by calling them "corrugated plates", and then making the assumption that all corrugated plates are Wolhaupter plates, is futile.

It would be much more reasonable for the plaintiff to call all these corrugated plates "Dunham Plates", for its predecessor, the Q. & W. Co., owned the Dunham patent No. 469,386, of 1892. (See assignments, Rec. pp. 884–886.) The Dunham patent (Rec. p. 1169), which is prior to Wolhaupter, shows and describes a truly corrugated tie plate (see our main brief, p. 48), the corrugations running at right angles to the rail and parallel to the tie, as in Wolhaupter's first patent in suit. Plaintiff's witness, Bell, admits that the Dunham plate is of "the corrugated top type". (Rec. p. 143, X-Q. 282.) It is very misleading, therefore, for the plaintiff thus without justification to call all its corrugated tie plates "Wolhaupter Plates" and to pretend or suggest that all such plates embody the inventions of the patents in suit. Any attempt to support these patents on this ground is absolutely without justification.

Even if it be assumed that the plaintiff's plates, like Exhibits Nos. 24 and 25, are within the first Wolhaupter patent, the commercial use of such plates merely shows that they, like a great many other plates such as the Goldie plates (*supra*, p. 24) and Servis plates (Rec. p. 85), could be made and sold commercially when backed by a strong company such as the plaintiff. Moreover, these plates lacked the most vital characteristics of the plate of the first Wolhaupter patent in suit. Their temporary manufacture, therefore, does not afford the basis for plaintiff's argument in favor of the patents in suit. There is

no evidence and no reason to believe that these so-called "Wolhaupter Plates" filled a long felt want, or were in fact a distinct advance in the art.

In addition to the disadvantage of permitting the rail to cut the necks of the spikes because these Wolhaupter plates had no parts against which the rail abutted, they had the disadvantage of severely cutting and injuring the tie because of the long, sharp, deep flanges penetrating the tie parallel to its grain (Faulkner, Rec. p. 208, Q. 87, p. 215, Q. 175, p. 233), and the disadvantage of permitting the plate to move laterally and the rail to spread in use, as above pointed out (*supra*, p. 38, Wallace, Rec. p. 508, Q. 15, p. 272, X-Q. 452, p. 223, Q. 266; Elliott, Rec. p. 251, Q. 73, p. 254, X-Q. 101; Storey, Rec. p. 312, Q. 32; Steinback, Rec. p. 481, Q. 29).

The plaintiff's contention that such plates were less worn by the rail than plates with flat tops because the grooves act as receptacles for sand and grit is not proven. It rests upon the statements of prejudiced witnesses who are seeking to find some advantages in the grooves other than the mere saving of weight, which must be conceded to be their principal advantage.

The plaintiff gives no instance of a flat top tie plate that had become so worn as to be unfit for use. The plaintiff has offered in evidence some tie plates worn by the rail, but it is admitted that these plates were carefully selected to show this wear. (Wolhaupter, Rec. p. 181, X-Q. 141.) The fact is that the abrasion of the rail on the tie plate is practically negligible. (Wallace, Rec. p. 575, X-Q. 149.)

Moreover, the making of grooves in the top of the plate to act as sand receptacles, supposing that the grooves have that function, was not new with Wolhaupter, who was not the first to provide such grooves or ascribe to them that function. This was done by Wells in his patent No. 203,570, and by others before Wolhaupter as above pointed

out (*supra*, p. 18). The truly corrugated plate of the Dunham patent No. 469,386 (Rec. p. 1169) has grooves in its upper surface, which would perform the same function.

The plaintiff, to be sure, has done a large business in tie plates. It claims 70 per cent of the business in this country. Of that 70 per cent it claims that *at the present time* 77 per cent is in tie plates having a "corrugated top". As we have shown, this fact does not prove any merit in the Wolhaupter patents in suit. Moreover, the unreliability of the plaintiff's figures is shown by its admission, that it calls not only defendants' plate, but also the Harriman plate (Exhibit 12, Rec. p. 41) and the Atchison plate of 1905 (Exhibit 13, Rec. p. 42) "Wolhaupter plates". The two latter plates have no flanges of any kind on their bottoms. They have flat bottoms. They therefore are not plates of the patents in suit, all of which have tie penetrating flanges on the bottom. The plaintiff is careful not to specify what kinds of plates it has marketed. It makes no specific statements. Its general assertions are unreliable. In any event they show no merit in the plates of the Wolhaupter patents in suit.

It is therefore evident, we submit, that the Wolhaupter patents cannot be supported by any theory that they have taken the market, or that they are for the last step that wins, or that Wolhaupter succeeded where others failed, or that they are the only plates that are satisfactory commercial plates. The fact is that the Wolhaupter patents show and describe forms of tie plates which have not proved commercially valuable, and which have not been generally adopted. There is no pretence that any tie plates like those of the second and third Wolhaupter patents have ever been made.

Under these circumstances there is no reason to attribute any invention to Wolhaupter in the design of the plates of these patents, and there is no reason why this

Court should give them an expanded construction which is entirely unjustified by their specifications and claims, which, in order to cover the defendants' tie plate, it would be necessary to stretch to the point of rendering them anticipated by the prior art.

This case presents at most three specific inventions in a crowded art in which each patentee, if he be entitled to anything at all, is entitled to a patent for his specific improvement. It cannot be pretended that the defendants' tie plate is that described in any one of the three Wolhaupter patents in suit, or is a colorable imitation of any one of them.

AUTHORITIES THAT THE WOLHAUPTER PATENTS IN SUIT BEING FOR SPECIFIC IMPROVEMENTS CANNOT BE BROADLY CONSTRUED.

In *Computing Scale Company* v. *Automatic Scale Company,* 204 U.S. 609, the Supreme Court said (p. 621):—

> "Conceding that this spiral rod and its connections with the cylinder in the manner and for the purposes stated is a novel feature in the combination and entitled to protection, it is of that narrow character of invention which does not entitle the patentee to any considerable range of equivalents, but must be practically limited to the means shown by the inventor. The distinction between pioneer inventions permitting a wide range of equivalents and those inventions of a narrow character, which are limited to the construction shown, has been frequently emphasized in the decisions of this Court."

In *Boyd* v. *Janesville Hay Tool Company,* 158 U.S. 260, the court said (p. 261):—

> "It clearly appears that Boyd was not a pioneer in this department of machinery. Many inventors had

preceded him, and many patents had been issued for improvements in hay carriers in form and purpose similar to those described in Boyd's specification. We think the case is one where, in view of the state of the art, the patentee is only entitled, at the most, to the precise devices mentioned in the claims."

In *Blake* v. *San Francisco*, 113 U. S. 679, the Supreme Court said (p. 681): —

> "The evidence shows that Bailey was not the first to conceive the idea of a device for opening or closing rigidly an automatic valve. The same thing had been done by means of wedges and screws and other devices. *He cannot, therefore, cover by his patent all the devices for producing this result, no matter what their form or mode of operation. The claim must be confined to the specific device described in the specification and claim*, namely, a pin-hole and pin. If this construction of the claim be adopted, it is clear that no infringement is shown".

To the same effect are: —

Railway Co. v. *Sayles*, 97 U. S. 554, 556;
Bragg v. *Fitch*, 121 U. S. 478, 483;
Kokomo Fence Machine Co. v. *Kitselman*, 189 U. S. 8, 18;
Kenny Mfg. Co. v. *J. L. Mott Iron Works*, 137 Fed. Rep. 431, 434 (Coxe, J.);
National Hollow B. B. Co. v. *Interchangeable B. B. Co.*, 106 Fed. Rep. 693, 710 (C. C. A. 8th Cir.);
Roemer v. *Peddie*, 78 Fed. Rep. 117, 118 (C. C. A. 3d Cir.);
Lamson Cash Ry. Co. v. *Godehard*, 59 Fed. Rep. 776, 780 (C. C. A. 8th Cir.).

We therefore insist that when the claims in issue of the Wolhaupter patents in suit are read, as they should be, as descriptive of the plates shown and described in the specifications of those patents, they are not infringed by the defendants' tie plate.

OPINION OF THE COURT OF APPEALS FOR THE SEVENTH CIRCUIT.

The Opinion of the Court of Appeals for the Seventh Circuit holding valid and infringed the three Wolhaupter patents in suit is printed at p. 119 of our main brief and at p. 1408 of the Record.

We submit that the Court of the Seventh Circuit erred fundamentally in failing to apply to the Wolhaupter patents and their relations to the tie plates of the prior art and to the defendants' alleged infringing tie plate the definite and well settled principles of Patent Law, which this Court has established in its decisions dealing with the questions of validity, construction and infringement of Letters Patent.

It is fundamental that the essence of a patented invention is to be looked for and found in the *thing*, whether it be a machine, an article or a process, which is described in the specification of a patent, and that the claims are but the definitions of that alleged invention. They must be read in view of the thing that was new, and no mere phraseology can expand their scope beyond that which was in fact the real invention, if any, disclosed in the patent. This principle is completely neglected by the Court of Appeals for the Seventh Circuit, which treats the claims in issue of the Wolhaupter patents in suit as utterly disassociated from the inventions, if any, and even from the devices shown and described in those patents.

It overlooks the vital distinctions between the defendants' tie plate and the tie plates of the patents in suit and

ignores the requirements in the several specifications and the limitations, which we respectfully submit, must be imposed on the claims.

Another fundamental principle which that court overlooked is that a patent must be construed with reference to those devices which were known and used or patented or disclosed in printed publications prior to the date of the alleged invention, and that when so construed the patent and its claims should be compared with the defendants' structure to ascertain whether the invention, *which was actually made by the patentee,* has been taken by the defendant.

The Court of Appeals for the Seventh Circuit first considers claim 8 of the first Wolhaupter patent in suit, and takes as its text the finding of the Court of Appeals for the Sixth Circuit in the Elyria case that —

> "Wolhaupter endeavored to cover a field of invention far wider than he was entitled to occupy, and the claim must be held void, because it is broader than the real invention." (Opinion of the Court of Appeals for the Sixth Circuit; our main brief, p. 116.)

The Court then eliminates, as having no bearing whatever on the construction of claim 8, the fact that the Wolhaupter plate described in the patent has "stepped" bottom flanges and therefore the capacity of being reset after once the plate and rail have been moved lengthwise on the tie. The Court ignores the fact that this capacity of the Wolhaupter plate can be present *only in a plate having bottom flanges which are parallel to the tie.* In so doing the Court disregards the structure of the plate of the first Wolhaupter patent in suit, which must be taken into account as the *only structure to which the patent relates,* inasmuch as it is the only one to which the alleged improvements are applicable.

The Court, after quoting from the patent, refers to the alleged advantages —

> " in having a series of flanges on the upper side of the plate for the rail to rest upon ". (Our main brief, p. 125),

and states: —

> " These advantages are manifestly independent of of the character of the tie-engaging flanges on the under side of the plate." (Our main brief, p. 126.)

The Court then proceeds to draw the conclusion that claim 8 does not define the particular character of the flanges on the bottom of the plate and their relations to the structure and to the requirements of the patent, but is satisfied by —

> " devices of any sort adapted to penetrate and engage the tie ". (Our main brief, p. 126.)

The Court, while pointing out the fact that the advantages of the top flanges are independent of the character of the bottom flanges, ignores the inevitable conclusion that therefore the top and bottom flanges are each separate and independent features, which have no mutual co-operation in the tie plate but are merely old devices "aggregated", and that for such an aggregation no valid patent can be taken. (See *supra,* p. 30.)

The cases of —

> *Oshkosh Grass Matting Co.* v. *Waite Grass Carpet Co.,* 207 Fed. Rep. 937 and
> *Krell Auto Grand Piano Co.* v. *Story & Clark Co.,* 207 Fed. Rep. 947

are cited by the Court as supporting its contention that the collocation of Wolhaupter's upper and lower flanges is a patentable combination and not a mere unpatentable

aggregation. Those cases, however, are plainly to be distinguished, for in those cases the patents were for machines which had co-operative or successively-acting mechanisms, which were in each case combined to produce a single new and useful result.

In the Wolhaupter tie plate, on the contrary, the top and bottom flanges are absolutely independent features, both taken from the prior art, which do not modify each other's action or perform any new function in relation to one another in that plate. They are therefore an "aggregation" of features, exactly of the kind that was held not to be patentable in the case of *Hailes* v. *Van Wormer* fully discussed by us (*supra*, p. 31).

The Court of Appeals for the Seventh Circuit before discussing the art prior to Wolhaupter makes a most fundamental error in its statement that:—

> "The utility of the invention is abundantly demonstrated by the instant and growing demand, amounting at the beginning of this suit to over 40,000,000 plates a year, and is further shown by appellees' move to share in this commercial success in the face of the certainty of vigorous and expensive litigation." (Our main brief, p. 128.)

This statement shows a serious misconception of the actual facts set forth in the record. As we show above (p. 67) no tie plate of the form shown in the first Wolhaupter patent in suit was ever placed upon the market, and the only plates having the least resemblance to it (and that resemblance was by no means close) were tried for a few years and then abandoned because of their deficiencies and destructive action upon the tie. It is not contended that any plates of the second and third Wolhaupter patents were ever marketed. The present

demand for tie plates is not for those of the Wolhaupter patents in any sense.

As to the specific form of the defendants' tie plate here in controversy, it is the admitted and undisputed fact that the defendants were the first to make and sell this form of plate and that in its commercial use the plaintiff copied the defendants and not the defendants the plaintiff.

The Court in the statement last above quoted is not logical, for it first assumes that the defendants' plate, copied by the plaintiff, is that of Wolhaupter, and then argues that its commercial use shows invention by Wolhaupter. This assumption puts the cart before the horse by assuming at the very beginning of the inquiry that the defendants' plate is an infringement of the plaintiff's patents in suit.

This assumption ignores the fundamental and significant differences between the plates of the Wolhaupter patents in suit and the defendants' alleged infringing plate which, in view of the prior art, absolutely negative infringement.

The Court also is inconsistent in its discussion of the prior art. After having stated that the character of tie-penetrating and engaging devices was immaterial, it proceeds to distinguish the prior patents to Hudson, No. 142,020, to Wells, No. 203,570, and to Dunham, No. 489,386, mainly on the ground that the character of their tie-penetrating and engaging devices is not that of the first Wolhaupter patent in suit.

The Court's attempt to distinguish between a rail chair and a tie plate (our main brief, p. 130) is most elusive and unsubstantial. The attempted distinction that rail chairs are "bolted or otherwise permanently and securely affixed to the rail", and therefore "they belong with the rail", while a tie plate is held by spikes "whose heads clamp over the flange of the T-rail", and therefore "they belong with the tie" is specious and in any event does not apply to the rail chair of the Wells patent because, as shown in

that patent (*supra*, p. 19), the spikes hold against the top of the rail flange, and have the same mode of operation in attaching the rail and plate to the tie as do the ordinary spikes used with tie plates which grip the rail and not the plate.

The Court was certainly in error in its assertion that "the law of the rail chair structure" was such that the supposed grinding of the rail on the plate, due to the presence of sand between the two, was not a condition that had to be met by workers in the rail chair art (our main brief, p. 130). On the contrary, as we have pointed out (*supra*, p. 19), the Wells patent specifically states that the two grooves B, B, in the upper surface of the rail chair are to "serve as receptacles for sand or grit that may enter between the chair and the rail" (Wells patent, p. 1), which is precisely the function attributed to the grooves in the upper surface of the plate of the first Wolhaupter patent and concerning which practically inconsequential function the plaintiff makes so much talk in this case.

The Court in its consideration of the Goldie patent No. 485,030 *supra*, p. 24, (our main brief, p. 134), neglects the fact that Goldie plates went into substantial commercial use before Wolhaupter and were used with rails having flat bottoms, so that there was in actual practice a substantial channel beneath the rail and between the rail-supporting surfaces of the plate, which channel actually served to the same extent as did the grooves of the Wolhaupter plates to free those rail-bearing surfaces of sand and thus prolong the life of the plate. (See *supra*, p. 56.)

Of the Goldie plate the Court states: —

> "The manufacture of this plate, as the patentee thereof himself testified, was abandoned, and its use was entirely superseded by the Wolhaupter plate." (Our main brief, p. 134.)

It is impossible, we submit, to draw such conclusions from the facts set forth in the record. These facts are that the specific form of Goldie plate shown in the patent was successfully used, whereas no use was ever made of the plate shown and described in the first or in any of the Wolhaupter patents in suit. If the commercial use of the defendants' alleged infringing plate (introduced into use by the defendants) has any bearing upon this statement, it is clear that the statement is incorrect because that plate embodies the features of the Goldie plate, viz: the rail abutting shoulder, the upper groove and rail-bearing surfaces and the bottom ribs, all parallel to the rail and across the tie, and it does not contain a single specific feature taken from the Wolhaupter plate.

The Court plainly was misled by the plaintiff's argument as to the Wilson patent, No. 522,867, for of this patent it said: —

> "when the whole plate is put together as Wilson instructed it to be, the rail rests upon a flat plate of uniform thickness throughout." (Our main brief, p. 135.)

This is an error, as a glance at the Wilson patent (Rec. p. 1229, *supra*, p. 25) will show. Figs. 1 and 2 of that patent show the plate as it is in actual use. Fig. 1 shows five flanges a^1 on which the rail rests. These flanges are transverse to the rail. Between them are four channels or grooves. In two of these channels is a special spike device, the top of which is shown in Fig. 2 *below the bottom of the rail*. In each of the remaining two grooves is an ordinary spike. Clearly the grooves offer fully as much opportunity for the removal of sand and grit from the tops of the flanges as do the top grooves in the plate of the first Wolhaupter patent in suit. In Wilson each flange a^1 is adjacent to a groove in the plate or is at the edge of the

plate itself, thereby giving free opportunity for the escape of sand and grit. The Wilson patent, as pointed out (*supra*, p. 53), absolutely anticipates any construction of claim 8 of the first Wolhaupter patent in suit which would read it upon the defendants' tie plate.

The truly *corrugated-top* plate of the Dunham patent No. 469,386, the Court seems to have dismissed on the ground that in a figure representing a modification Dunham shows a plate with a flat top. But this does not lessen the significance of Fig. 1, which shows a plate with a corrugated top. It cannot be questioned that the bottom corrugations would penetrate and engage the tie to some extent under the pressure of the rail, and that the corrugations would not flatten out if the plate were made of suitable strength. The only difference between the Wolhaupter and Dunham plates is that stated by Judge Kohlsaat in his Opinion in the Hart case. (Our Main brief, p. 93):

> "The device of claim 8 differs from the device of the Dunham patent only in its under flanges being more or less sharpened". (Our Main brief, p. 99.)

We therefore submit that the Court of Appeals for the Seventh Circuit was wrong in its finding that "never prior to Wolhaupter had the tie plate of claim 8 been produced", if that claim be so misconstrued as to broaden it to cover the defendants' alleged infringing tie plate.

We also deny that Court's statement that —

> "since then the entire development has been along the line of improving the tie plate of claim 8".

On the contrary, the fact is that the so-called Wolhaupter plates were tried and abandoned and the art was developed on the lines of a flat plate provided with suitable rail-engaging and tie-engaging features, all parallel to

the rail, which were old before Wolhaupter and which are the antitheses of the features of the Wolhaupter plate in function, mode of operation and structure.

As an illustration of how far the Court of Appeals for the Seventh Circuit wandered from the actual facts, we quote its statement as to the second Wolhaupter patent in suit:

> "The prompt acceptance of this idea, the commercial success to which this idea has contributed, and the fact that seven years elapsed after Wolhaupter had disclosed the general combination before any of the numerous engineers interested in railroad construction perceived the possibilities of such a relationship, lead us to resolve any doubt that might be created by the apparent simplicity of the step, in favor of the validity of the patent." (Our Main brief, p. 139.)

It is enough to say that it is the admitted fact that no plate like that of the second Wolhaupter patent in suit was ever made or used.

As to the third Wolhaupter patent in suit, the court made no attempt whatever to consider the prior art with relation thereto. As we have shown (*supra*, p. 66), the claims in issue are absolutely anticipated.

The Court's discussion of the question of infringement is very meagre. Of this question it says:—

> "So respecting infringement the question is whether these claims read upon the structure put forth by the appellees." (Our Main brief, p. 140.)

This, we submit, is clearly an error. This Court in its many decisions referred to and applied in *Westinghouse* v. *Boyden Power Brake Co.*, 170 U. S. 537,568, has pointed out that infringement does not necessarily follow because the language of the claim as a matter of words can be read

upon a defendant's structure, but that substantial likeness in character and mode of operation are essential to infringement. Such considerations the Court of Appeals for the Seventh Circuit absolutely ignored. We submit that they show conclusively that the defendants' plate is not an infringement of any of the patents in suit.

The Court of Appeals for the Seventh Circuit advances as its final argument as to the defendants' tie plate: —

> "As this tie plate is substantially a copy of appellant's commercial structure, the real inquiry is whether appellant has abandoned its own inventions." (Our Main brief, p. 140.)

It is necessary only to remind this Court that the defendants made and sold the specific form of the tie plate referred to before the plaintiff made and sold them. The plaintiff copied the defendants and under such circumstances it would not be extraordinary if it did abandon its own inventions. Moreover, it owns a number of patents on tie plates in addition to those in suit. By a parity of reasoning it has "abandoned" the inventions of those patents, inasmuch as the plaintiff does not claim that they are embodied in the form of tie plate marketed by it in imitation of the defendants' tie plate. If it abandoned the inventions of these patents, why should it not have abandoned the inventions of the patents in suit?

CONCLUSION.

There can be no reasonable contention made by the plaintiff that the defendants' plate copies in any respects the features of the plates of the Wolhaupter patents in suit. We submit that the fundamental similarities between the defendants' plate and those of the prior art and the striking differences between the defendants' plate and the

plates of the Wolhaupter patents in suit cannot be ignored. They necessarily lead to the conclusion that the defendants' plate is not an infringement of those patents, even if they are valid, which we deny.

We respectfully submit that the reasoning and conclusion of the Court of Appeals for the Sixth Circuit (our Main brief, p. 105), following the views of Judge Kohlsaat (our Main brief, p. 93) and Judge Day (our Main brief, p. 103) rather than those of the Court of Appeals for the Seventh Circuit, will find favor with this Court and that, in both cases, there should be ordered a decree dismissing the bill with costs.

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